

## COMPANY ANNOUNCEMENT

19 May 2016

### Frieda River Copper-Gold Project feasibility study completed

PanAust Limited ('PanAust') is pleased to announce completion of the feasibility study for the Frieda River Copper-Gold Project ('Project') in Papua New Guinea ('PNG'). The feasibility study has been provided to PanAust's joint venture partner, Highlands Pacific Limited ("Highlands"), for review. Under the joint venture agreement, there is a process for an independent expert to be appointed to provide feedback and peer review of completion of the feasibility study.

Frieda River represents one of the largest undeveloped copper-gold deposits in the world. The Horse-Ivaal-Trukai, Ekwai and Koki (HITEK) global Mineral Resource is estimated at over 2.7 billion tonnes of mineralisation at an average grade of 0.42% copper and 0.23g/t gold (Appendix I) and contains 12 million tonnes (Mt) of copper and 19 million ounces (Moz) of gold. PanAust considers that the optimum approach to this substantial Mineral Resource is via a multi-staged development that involves an initial project stage that forms the platform for subsequent phases of exploration, Mineral Resource definition and development. In this manner, the initial Project development serves to de-risk subsequent investment and capitalises on the establishment of one-off fixed infrastructure developed during the initial stage that will also support subsequent development phases.

There are multiple pathways to further expand and extend the initial Project with potential development scenarios indicating that mill feed could be increased from 700Mt to 1,700Mt on currently known Mineral Resources. The HITEK deposits have not been closed off by drilling, and together with additional known deposits and exploration targets, provide considerable potential to grow the Mineral Resource base to support mine life extension and capital expansion. In addition the nearby high grade Nena deposit offers further potential for subsequent development.

The feasibility study contemplates an initial Project based on the HITEK copper-gold porphyry deposits and comprises a large-scale, open-pit mining operation that feeds ore to a conventional process plant nominally rated at 40 million tonnes per annum (Mtpa). Average annual production of metal in concentrate is 175,000 tonnes copper and 250,000 ounces gold (Table 1). The initial mine life is estimated at 17 years with 700Mt of mill feed that includes 608Mt of Ore Reserve (Appendix II) from Horse-Ivaal-Trukai (HIT). The mill feed represents approximately a quarter of the global Mineral Resource.

The project will have a competitive C1 cost of US\$0.69/lb copper (average over the life of mine) that will place it within the first quartile of the global copper cost curve once hydroelectric power is introduced, assumed in production Year five. Further opportunities exist to increase the contribution of low cost hydroelectric power to the overall energy supply and to support project expansion.

Mill feed over the life of mine includes 608Mt of the HIT Ore Reserves as well as 92Mt of Inferred Mineral Resource. The HIT open-pit design however is based exclusively on Measured and Indicated Mineral

2013 WINNER  
PROJECT DEVELOPMENT  
OF THE YEAR



2013 WINNER  
SUSTAINABILITY LEADERSHIP  
2010/2011 WINNERS  
BEST COMMUNITY DEVELOPMENT



2011  
LAO PDR LABOUR ORDER CLASS 1  
BEST RURAL DEVELOPMENT



2011 WINNER  
SOCIAL/COMMUNITY PRESENTED BY  
ETHICAL INVESTOR



Resources and a mine production schedule that supports the HIT Ore Reserve. The Ekwai and Koki open-pit designs are based on Inferred Mineral Resources. Ekwai and Koki are therefore not included in the Ore Reserve.

There is a low level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

A Mineral Resource drill program at Ekwai and Koki has been completed and samples are being analysed. The results are expected to improve the geological understanding and provide further data for the Mineral Resource estimate. Preliminary core inspection from the 2016 Mineral Resource drill program supports the continuity of mineralisation at both the Ekwai and Koki deposits.

**Table 1: Frieda River Copper-Gold Project: key initial stage parameters**

Description	Unit	First 5 years	Life of mine
C1 cash cost <sup>1</sup>	US\$/lb Cu	0.66	0.69
All in sustaining cost <sup>2</sup> (AISC)	US\$/lb Cu	1.46	1.23
Total on-site operating costs	US\$/t processed	15.31	14.79
Post tax NPV at a real discount rate of 8%	US\$ million	-	820
Post tax NPV at a real discount rate of 0%	US\$ billion	-	6.7
Pre-production capital cost <sup>3</sup>	US\$ billion	-	3.6
Development and sustaining capital over the life of mine	US\$ billion	-	2.3
Project internal rate of return (IRR) (real terms)	%	-	11%
Payback period (post production)	Years	-	6
Average copper recovery	%	83	84
Average gold recovery	%	65	65
Average annual copper in concentrate	ktpa	190	175
Average annual gold in concentrate	kozpa	260	250
Total mill feed (life of mine average grades: 0.50% copper, 0.29g/t gold)	Mt	210	700
Total waste mined	Mt	150	470
Strip ratio (waste:ore)	Ratio	0.7	0.7
Mine Life	Years	17	

Source: Frieda River feasibility study

<sup>1</sup> C1 cash cost: Brook Hunt convention for the reporting of direct cash costs comprising: mine site, product transportation and freight, treatment and refining charges and marketing costs; based on payable metal content.

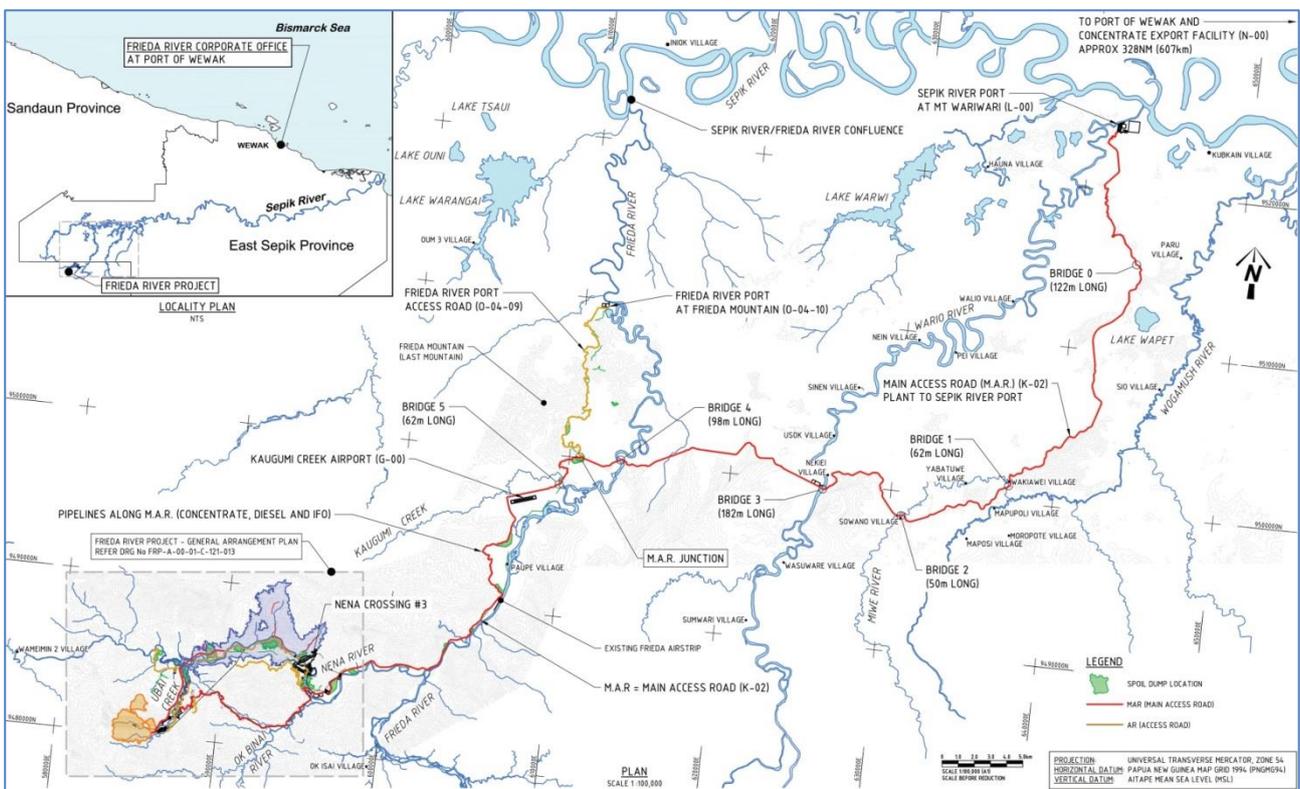
<sup>2</sup> All-in sustaining cost: the C1 cash cost plus royalties, corporate support and shared services costs; and, sustaining capital; and lease principal and interest charges.

<sup>3</sup> Includes leasing of the mine mobile fleet and modular power generation.

Disposal of both mine waste and plant tailings will follow the proven approach adopted at PanAust's Phu Kham Copper-Gold Operation in Laos where the majority of waste material reports into an integrated storage facility (ISF) designed to store all material subaqueously. The location of the ISF is positioned optimally in the valley below the mine and plant sites, thereby ensuring that all sediment and other discharges are intercepted.

Because of the Project's remoteness and lack of infrastructure, a reliable logistics chain has been defined which will operate between the coastal town of Wewak in East Sepik Province and the mine site (Figure 1). The multimodal configuration combines high capacity riverine barges operating along the Sepik River in conjunction with a new access road and pipelines to deliver inbound freight and export copper-gold concentrate. Concentrate will be transported from site to the Sepik River port via a 110km pipeline. Diesel and intermediate fuel oil will be transported to site in parallel pipelines. A new airport and runway will be constructed 40km from the mine site to service 50 seat passenger aircraft.

**Figure 1: Frieda River location and logistics**



Source: Frieda River feasibility study

Power will be supplied to the Project using an intermediate fuel oil (IFO) power station based on modular generating sets, augmented from Year 5 onwards with hydroelectric power. The catchment for the ISF is sufficiently large and the embankment wall will be sufficiently high to allow the generation of approximately 60% of the total 140MW demand.

The absence of existing infrastructure imposes a burden on the initial capital investment. The provision of shared-use infrastructure by third parties, including governments, offers a significant opportunity to reduce the initial capital costs of the Project and boost regional economic development. It is anticipated that this will be one of the priority investigations undertaken during the government approval and permitting process.

Economic evaluation is based on the commodity price forecasts supplied by Wood Mackenzie and the CPM Group. These suggest long term real (in 2015), inflation adjusted prices of US\$3.30/lb copper and US\$1,455/oz gold. While the short to medium term outlook for the copper price is less certain, the long term fundamentals appear strong.

The initial Project development yields a life of mine: post-tax, free cash flow of US\$6.7 billion, post-tax net present value of US\$820 million (discount rate 7.8% real) and internal rate of return of 11%. The pre-production capital cost is estimated at US\$3.6 billion, for a pre-production capital intensity of US\$17,000/t of copper equivalent in concentrate and a payback period (post commencement of production) of six years.

### **Economic impacts and sustainability**

The Project will be the first major, large-scale resource project in the Sepik provinces of Sandaun and East Sepik, a least-developed area of Papua New Guinea. It is anticipated that the Project will make a substantial positive economic contribution to both provinces and PNG as a nation.

Once in development, the 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 project implementation and operations.

Drawing on the extensive experience gained through the joint venture partners experience in PNG and internationally, the Project's comprehensive stakeholder engagement process has ensured stakeholders are aware of the Project and its potential impacts. Extensive structured engagement with host communities and all levels of government has demonstrated high levels of support for the Project and provides a robust platform for sustainable social and business licenses to operate.

### **Project history**

Mineralisation in the Frieda River area was first identified in the 1960s and has been the focus of several phases of exploration and studies by previous owners creating an extensive and valuable database.

On 1 November 2013, PanAust Limited announced it had entered into a share sale and purchase agreement with a subsidiary of Glencore Xstrata plc to acquire its interest in the Frieda River Copper-Gold Project. The transaction completed on 25 August 2014.

On 2 September 2014, PanAust announced its development concept that would form the basis for its feasibility study. Since it commenced work on the Project PanAust has expended 235,000 man hours and invested around US\$65 million, including through:

- Mineral Resource, geotechnical and hydrogeological drilling programs
- Various specialist technical studies
- Inter-discipline, multiple account assessments to resolve key design decisions based on safety, environmental, technical, economic and social elements
- External, standalone peer reviews of geology, mine, process plant, ISF, power generation and transmission, and logistics strategy to validate design
- Community and related stakeholder engagement
- Benchmarking of design components based on similar size projects within the region
- Generating over 800 drawings to support the feasibility study
- Developing a 3D NavisWorks model of the Project site.

PanAust has built on the body of Frieda River Project knowledge and improved on previous feasibility study work by way of the activities listed below:

- An updated Mineral Resource estimate
- A reduced environmental footprint: reduced disturbance footprint and bulk earthworks quantities; and mine water management and storage of waste rock and tailings limited to a single catchment
- Reduced implementation risk: a staged mine waste management plan starting with a traditional truck and shovel operation, followed by expansion to a rope-supported conveyor system supported by low-cost hydroelectric power
- Improved Project understanding through development of a three-dimensional numeric groundwater model to predict open-pit water inflows; and bathymetric survey, hydrology investigations and a dredging assessment to design the logistics on the Sepik and Frieda rivers.

The current project scope has evolved over the course of the study from that originally identified at the outset. The key changes embraced are:

- the increase in scale to drive unit operating costs down
- the incorporation of additional Mineral Resources (Ekwai and Koki) in the mine plan
- a revised waste management plan
- the incorporation of hydroelectric power generation from the ISF
- the development of a new concentrate handling port at Cape Moem
- the installation of pipelines to convey both concentrate and fuels (diesel and IFO) between the Sepik River port and the mine site
- The construction of a new airport to handle 50 seat passenger aircraft.

Highlands provided valuable technical input and in-country knowledge that included joint risk assessments and technical review meetings.

### **Key milestones**

It is a condition of the key Exploration Licence (EL58) for the Frieda River Project that an application for a Special Mining Lease (SML) in respect of the Frieda River Mining Project be made on or before 30 June 2016. It is expected that this condition will be complied with.

The future development of the Project will ultimately be subject to a final investment decision (FID) by the Project proponents, the grant of an SML and all necessary permits, approvals and agreements required from the Government of PNG, landowners and other stakeholders, including with respect to such matters as government infrastructure support and the declaration of the Government's intention with respect to its level of ownership in the Project. In addition to all such requisite approvals, FID will require a supportive commodity price outlook, finance, and legal and regulatory certainty.

### **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. Frieda River Limited manages the Project and holds an 80% interest; Highlands holds the remaining 20% interest.

### **State Equity**

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

The Joint Venture Agreement provides that if the State exercises its right to acquire up to a 30% interest in the Project, Frieda River Limited will sell down the first 20% 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%. Should the State exercise its full entitlement to 30% of the Project, Frieda River Limited will sell down to a 55% controlling interest and Highlands Frieda Limited will sell down to a 15% interest.

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#### 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.*

**Appendix I: 2015 HITEK Global Mineral Resource estimate**

Classification	Tonnes (Mt)	Copper (%)	Gold (g/t)
Measured	829	0.49	0.27
Indicated	1,018	0.40	0.19
<b>M+I subtotal</b>	<b>1,846</b>	<b>0.44</b>	<b>0.23</b>
Inferred	895	0.38	0.22
<b>MII total</b>	<b>2,742</b>	<b>0.42</b>	<b>0.23</b>

Copper cut-off grade 0.2% (total copper)

**Horse-Ivaal-Trukai (HIT) Mineral Resource<sup>4</sup>**

Classification	Tonnes (Mt)	Copper (%)	Gold (g/t)
Measured	829	0.49	0.27
Indicated	1,018	0.40	0.19
<b>M+I subtotal</b>	<b>1,846</b>	<b>0.44</b>	<b>0.23</b>
Inferred	273	0.39	0.18
<b>MII total</b>	<b>2,119</b>	<b>0.43</b>	<b>0.22</b>

Copper cut-off grade 0.2% (total copper)

**Koki Mineral Resource<sup>5</sup>**

Classification	Tonnes (Mt)	Copper (%)	Gold (g/t)
Measured	-	-	-
Indicated	-	-	-
<b>M+I subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>
Inferred	452	0.37	0.25
<b>MII total</b>	<b>452</b>	<b>0.37</b>	<b>0.25</b>

Copper cut-off grade 0.2% (total copper)

**Ekwai Mineral Resource<sup>6</sup>**

Classification	Tonnes (Mt)	Copper (%)	Gold (g/t)
Measured	-	-	-
Indicated	-	-	-
<b>M+I subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>
Inferred	170	0.38	0.23
<b>MII total</b>	<b>170</b>	<b>0.38</b>	<b>0.23</b>

Copper cut-off grade 0.2% (total copper)

<sup>4</sup> Appendix 7-9 Mineral Resources and Ore Reserves of the Frieda River Copper-Gold Project feasibility report

<sup>5</sup> Appendix 7-9 Mineral Resources and Ore Reserves of the Frieda River Copper-Gold Project feasibility report

<sup>6</sup> Appendix 7-9 Mineral Resources and Ore Reserves of the Frieda River Copper-Gold Project feasibility report

## Appendix II: 2016 HIT Ore Reserve estimate<sup>7</sup>

Classification	Tonnes (Mt)	Copper (%)	Gold (g/t)
Proved	469	0.51	0.30
Probable	139	0.41	0.16
<b>Ore Reserves</b>	<b>608</b>	<b>0.49</b>	<b>0.27</b>

### Competent Person Statements

#### Mineral Resources

The data in this report that relate to Mineral Resources for Frieda River (HIT, Koki and Ekwai) 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 Reserves

The data in this report that relate to Ore Reserves for the Frieda River Project 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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<sup>7</sup> Appendix 7-9 Mineral Resources and Ore Reserves of the Frieda River Copper-Gold Project feasibility report