



# PNG Chamber of Mines and Petroleum Conference 28-30 November 2017



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The Company estimates its reserves and resources in accordance with the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves 2012 Edition (“JORC Code”), which governs such disclosures by companies listed on the Australian Securities Exchange.

# Established player in PNG



- World class copper, gold and nickel projects
  - **RAMU nickel-cobalt mine - annual production Co - 3300t, Ni - 32,600t**
  - **FRIEDA RIVER copper-gold project - being permitted**
  - **STAR MOUNTAINS copper-gold project - exploration drilling**
  - **SEWA BAY nickel laterite - exploration**
- +20 years operating history in PNG makes Highlands an ideal project partner
- Past involvement in the Porgera Gold Mine, Kainantu Gold Mine and various exploration sites in PNG



## Capital Structure

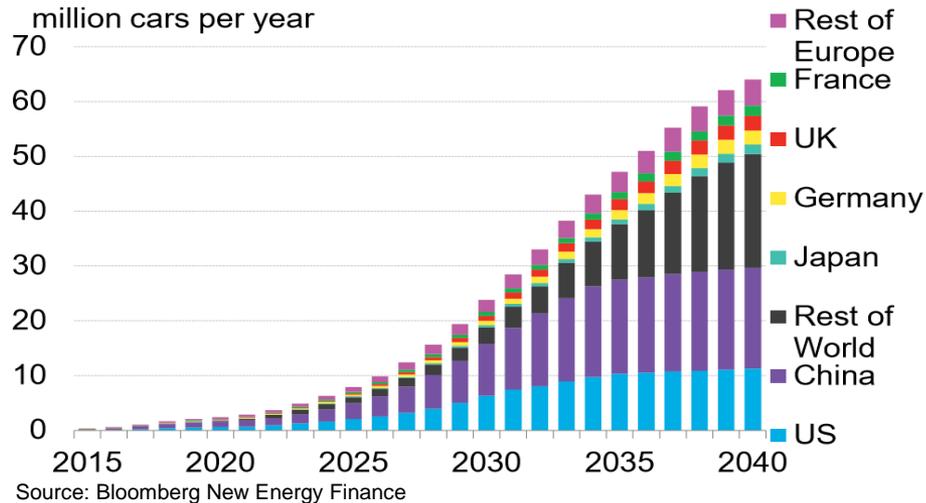
Shares on issue	936m
Share price	A\$0.09
<b>Market capitalisation</b>	<b>A\$90m</b>
Cash (September 2017)	A\$9m

## Major shareholders

 <b>TRAFIGURA</b>	15.9%	<ul style="list-style-type: none"> <li>▪ Global commodities trader</li> </ul>
 <b>GRAM</b>	13.9%	<ul style="list-style-type: none"> <li>▪ Chinese State-owned minerals producer based in Guangzhou</li> <li>▪ JV partner at Frieda River</li> </ul>
<b>PNGSDP</b>	11.5%	<ul style="list-style-type: none"> <li>▪ Long association with PNG</li> </ul>

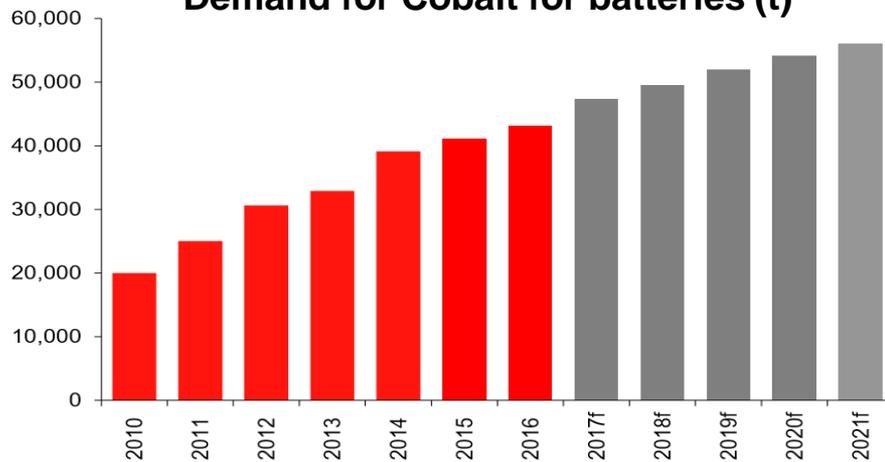
# EV fuelled battery market revolution

## Global Electric Vehicle sales forecast

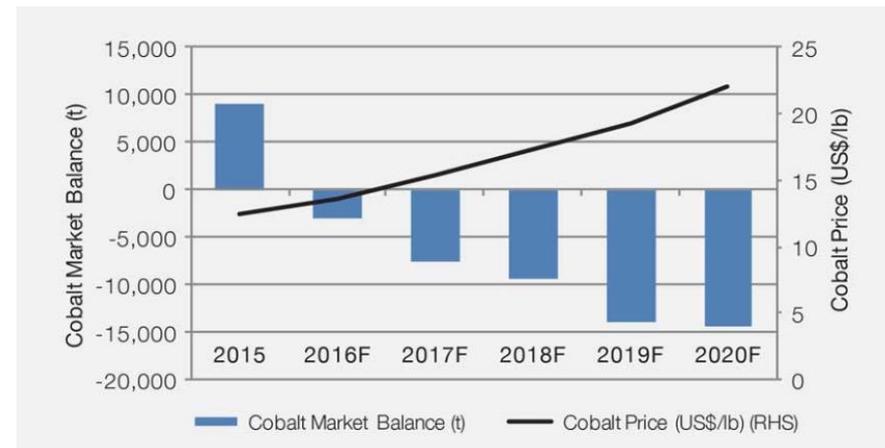


- By 2035, forecast EV production will require an additional 1.8Mt Ni and 679kt Co (Glencore)
- Roskill expects EV sales to be 26% of new car sales by 2030 = 580kt of nickel demand.
- Ramu is world's fifth largest producer of cobalt and produces preferred MHP product for EVs

## Demand for Cobalt for batteries (t)



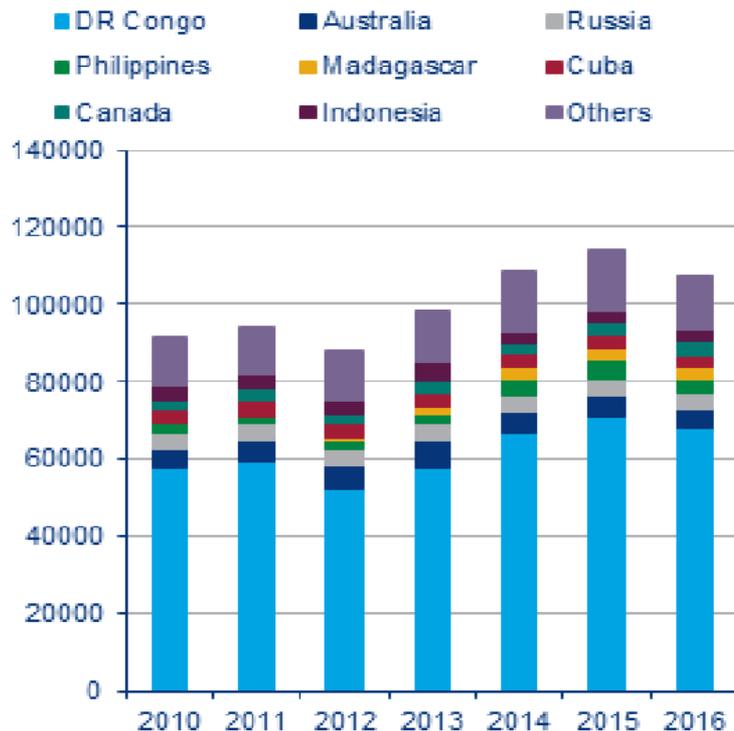
## Cobalt Market moving into deficit



# Ramu a significant global Co supplier

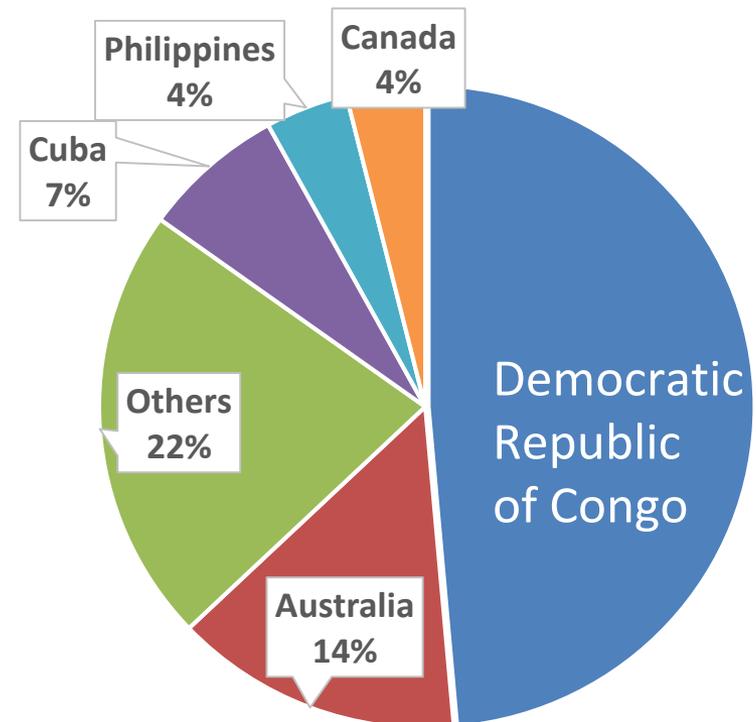
- DRC holds half the world's Co reserves and produces approximately 60% of global supply.
- Ramu produces 9.4% of global production ex DRC

## Global annual Co production 108,000t



Source: Wood MacKenzie

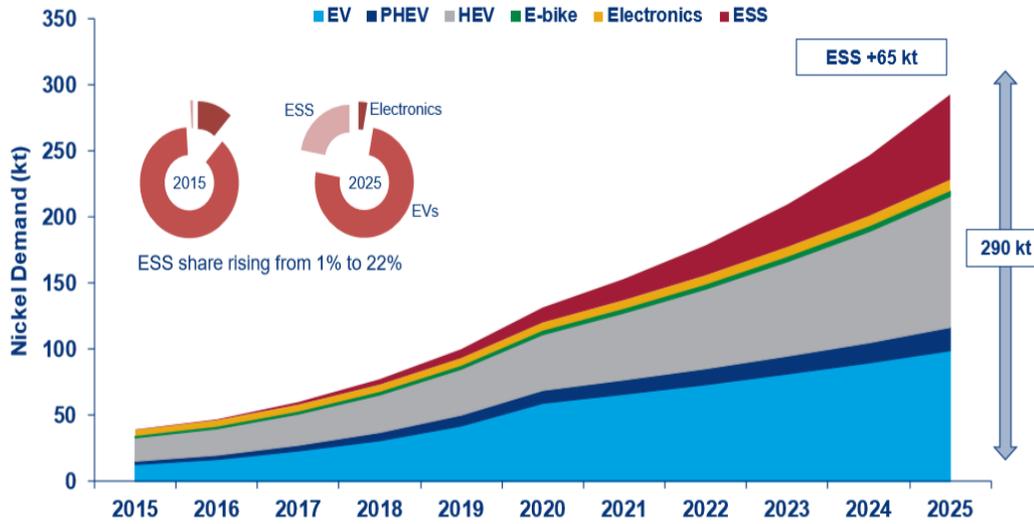
## Global Cobalt Reserves



Source: Wood MacKenzie

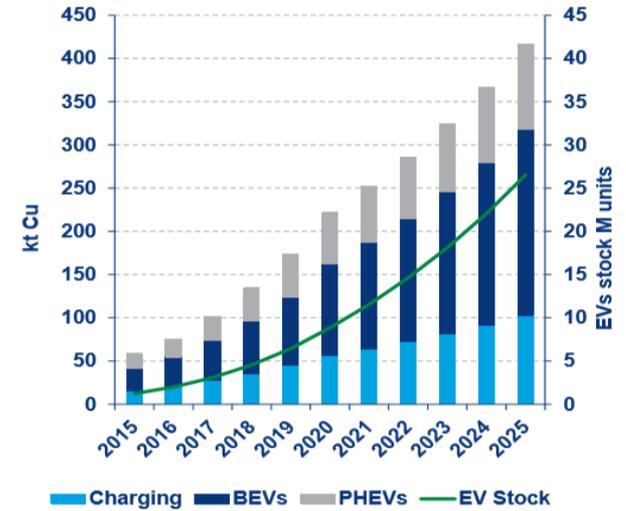
# Not just cobalt. Ni and Cu too.

## Nickel demand for EV and Energy Storage batteries



Source: Wood Mackenzie

## Copper consumption in EVs



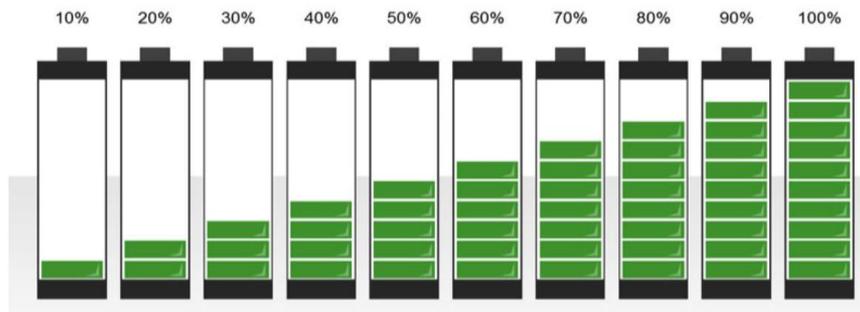
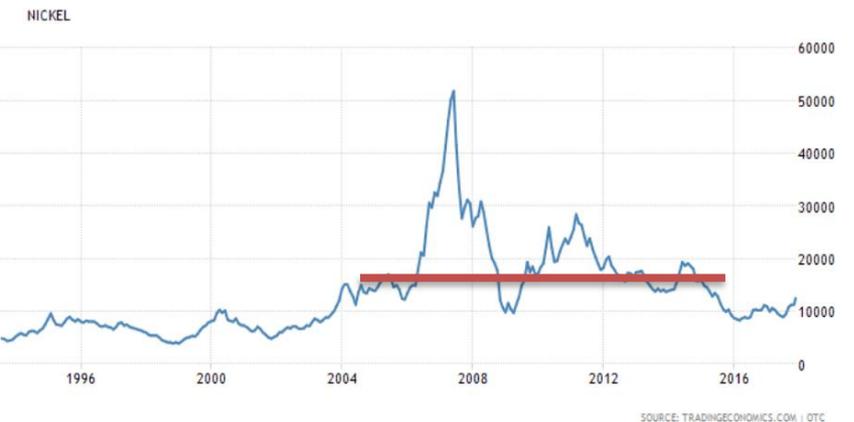
Source: Wood Mackenzie



# Compelling investment case

Major leveraged exposure to battery metals - nickel, cobalt, copper - as well as gold

Resource base of Highlands' projects (Ramu, Freida River)	Copper (Mt)	Gold (Mozs)	Nickel (kt)	Cobalt (tonnes)
<b>Total Resource Contained Metal</b>	12.7	20.4	1260	126,000
<b>HIG share</b>	2.6	4.1	108	11,000



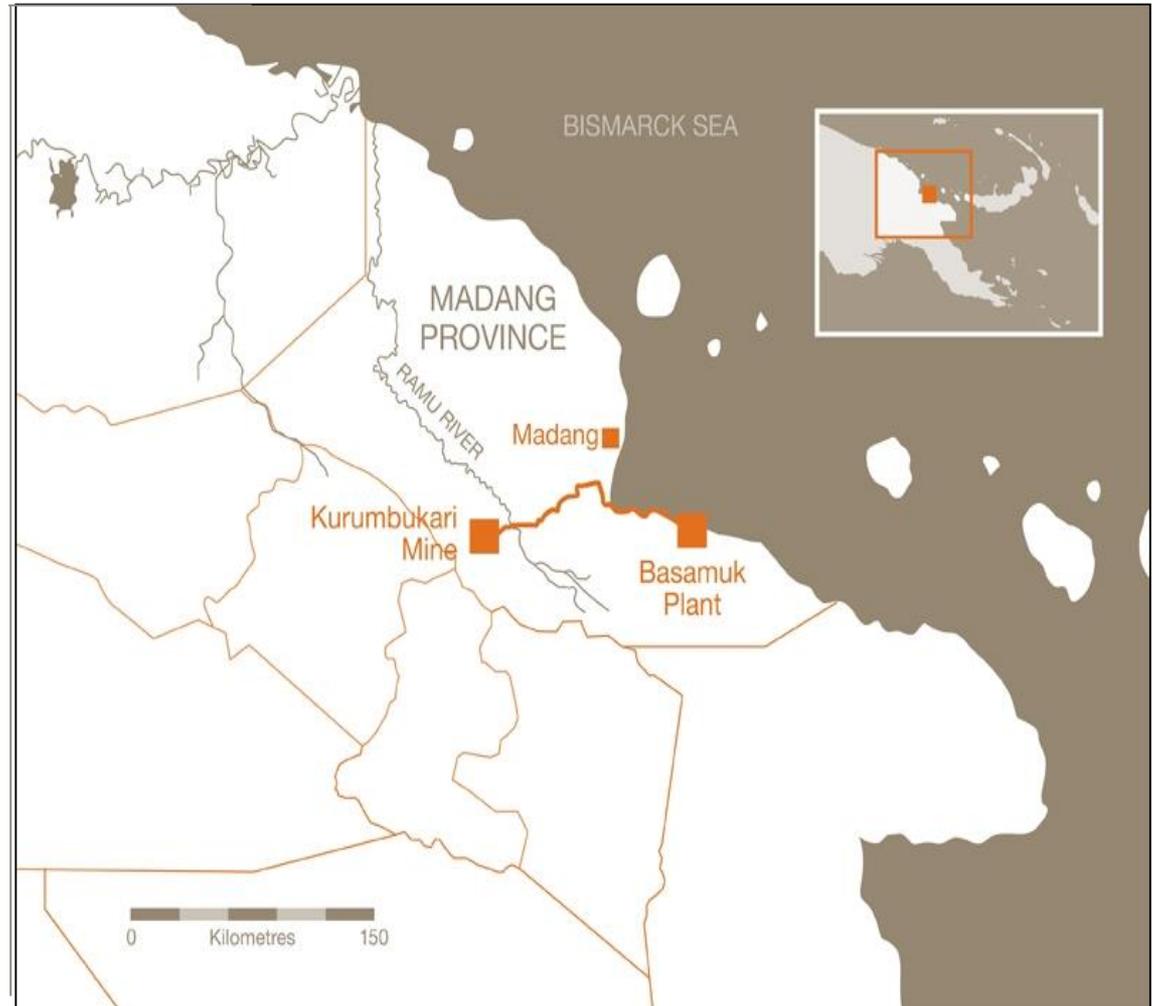
\*See full resource statements included in appendix. Excludes Star Mountains and Sewa Bay potential

# RAMU



# Ramu Nickel – PNG success story

- Joint venture –  
Highlands 8.56%, MCC  
Ramu 85%, PNG Govt  
and landowners 6.44%
- \$2.1 billion capex
- Annual production  
capacity 32,600t Ni,  
3300t Co
- Mine at Karumbukari.  
135km slurry pipeline to  
Basamuk port
- Constructed 2008,  
commissioned 2012
- Now achieving record  
production rates

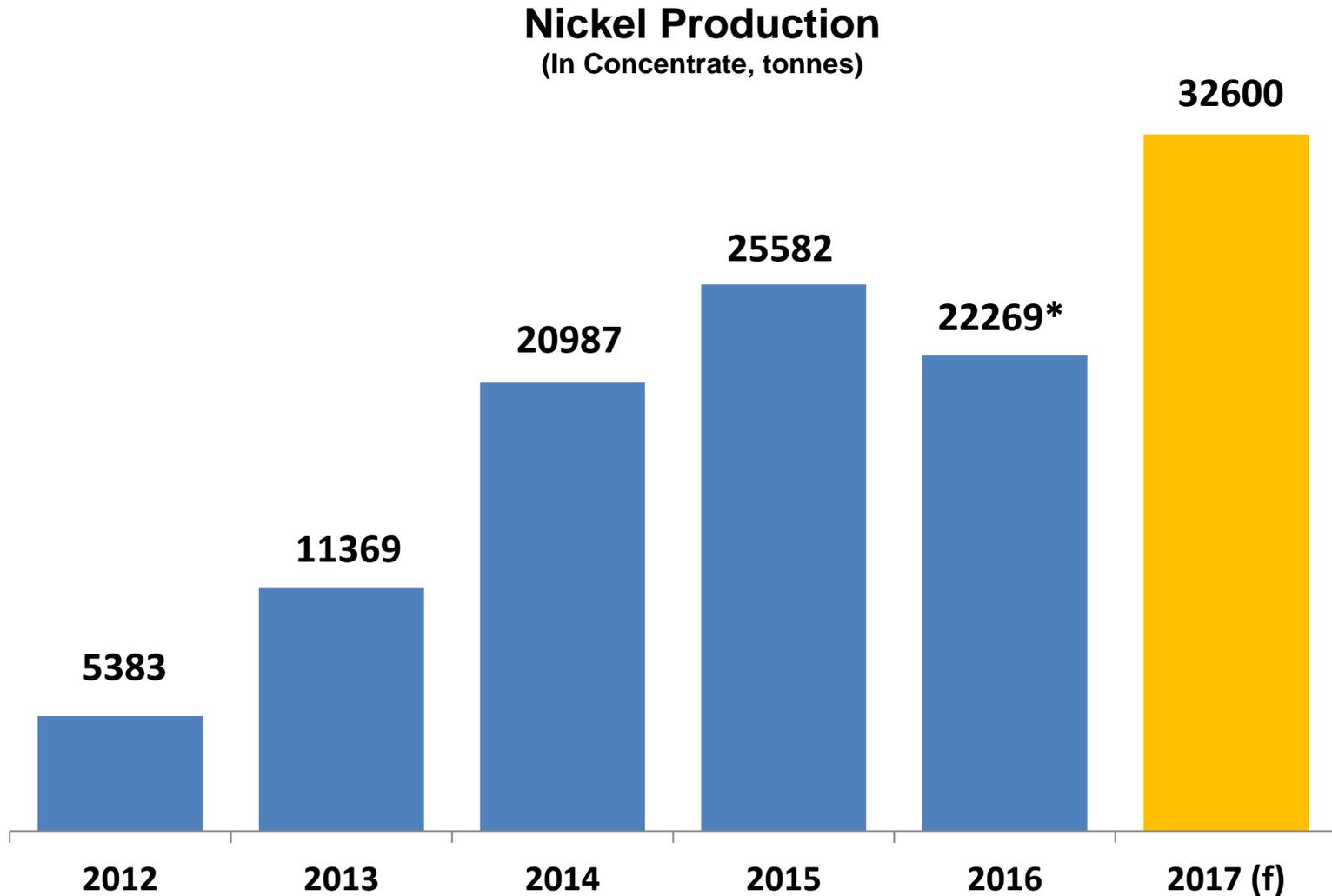


# Ramu – A PNG success story

- **Resource: 124 Mt @ 1.0% Ni and 0.1% Co**
- **Reserve: 49 Mt @ 1.0% Ni and 0.1% Co**
- **Resource/reserve growth to deliver mine life of +35 years**
- **Mining: Open pit, free digging**
- **Strip Ratio: Low 0.28:1**



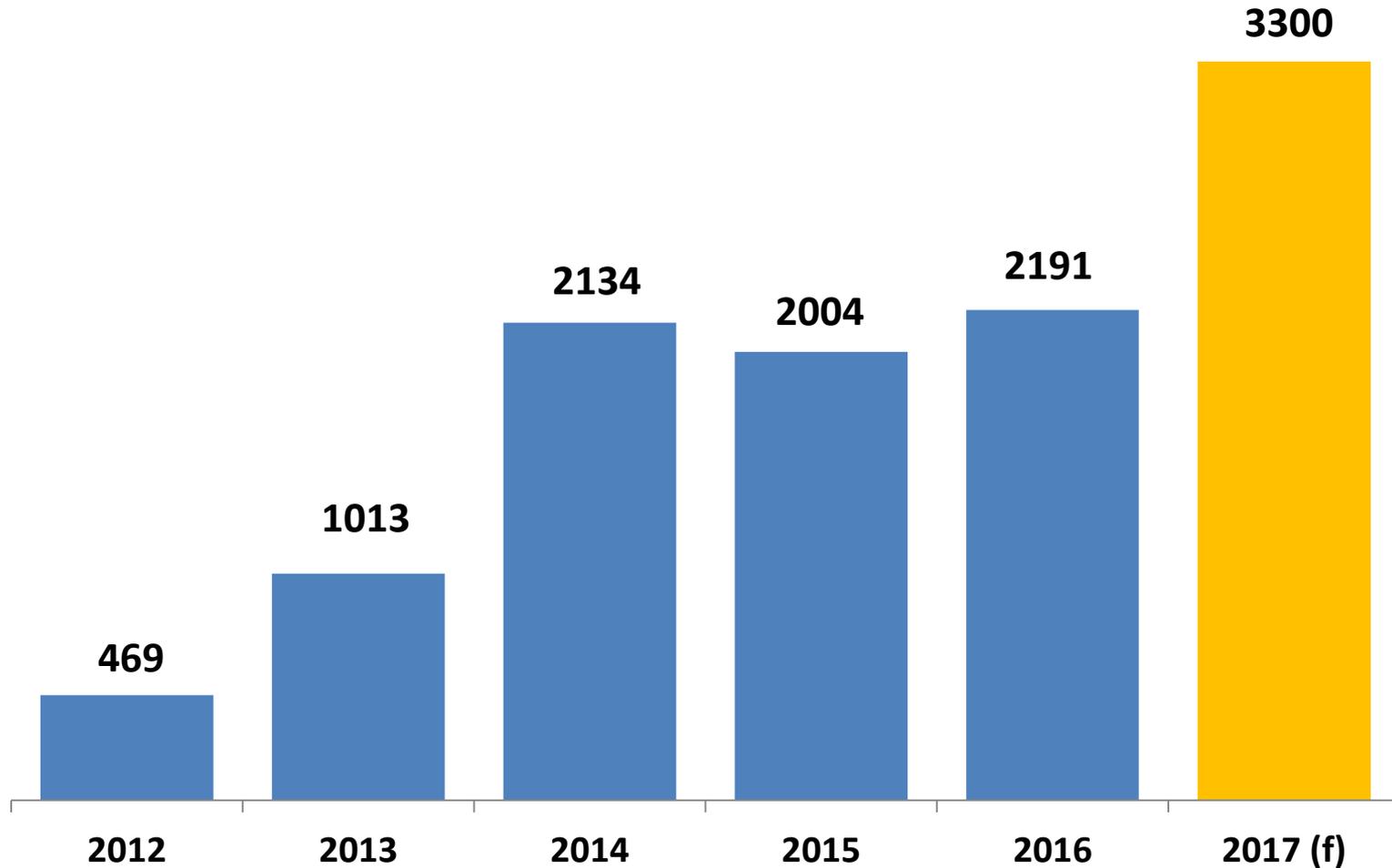
# Record production forecast 2017



\*2016 production affected by plant shutdown

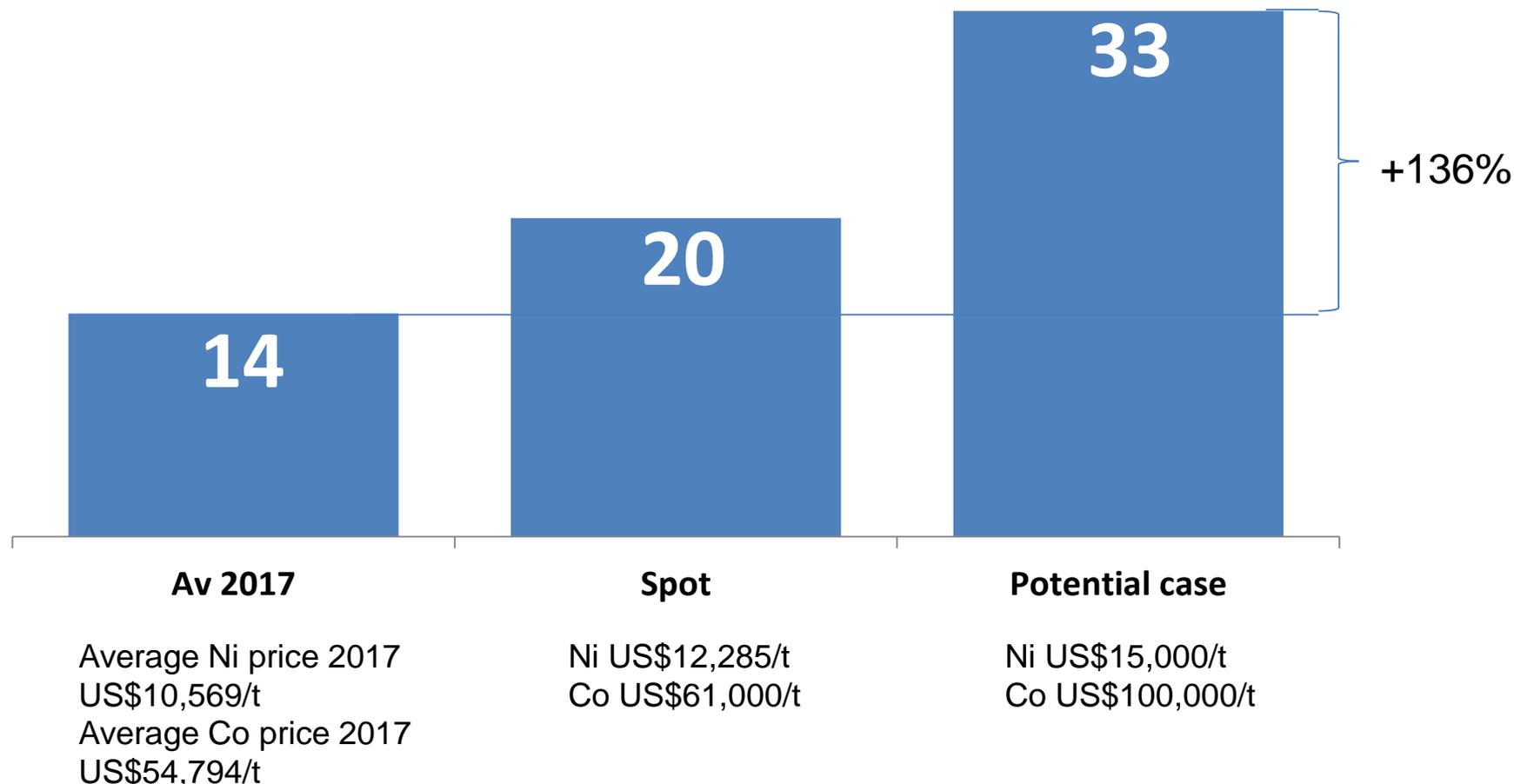
# Record production forecast 2017

## Cobalt Production (In Concentrate, tonnes)



# Major leverage to battery metal prices

**Highlands' share of Ramu project annual cashflow  
assuming 2017 Production Rates and Operating Costs  
(US\$ Million)**

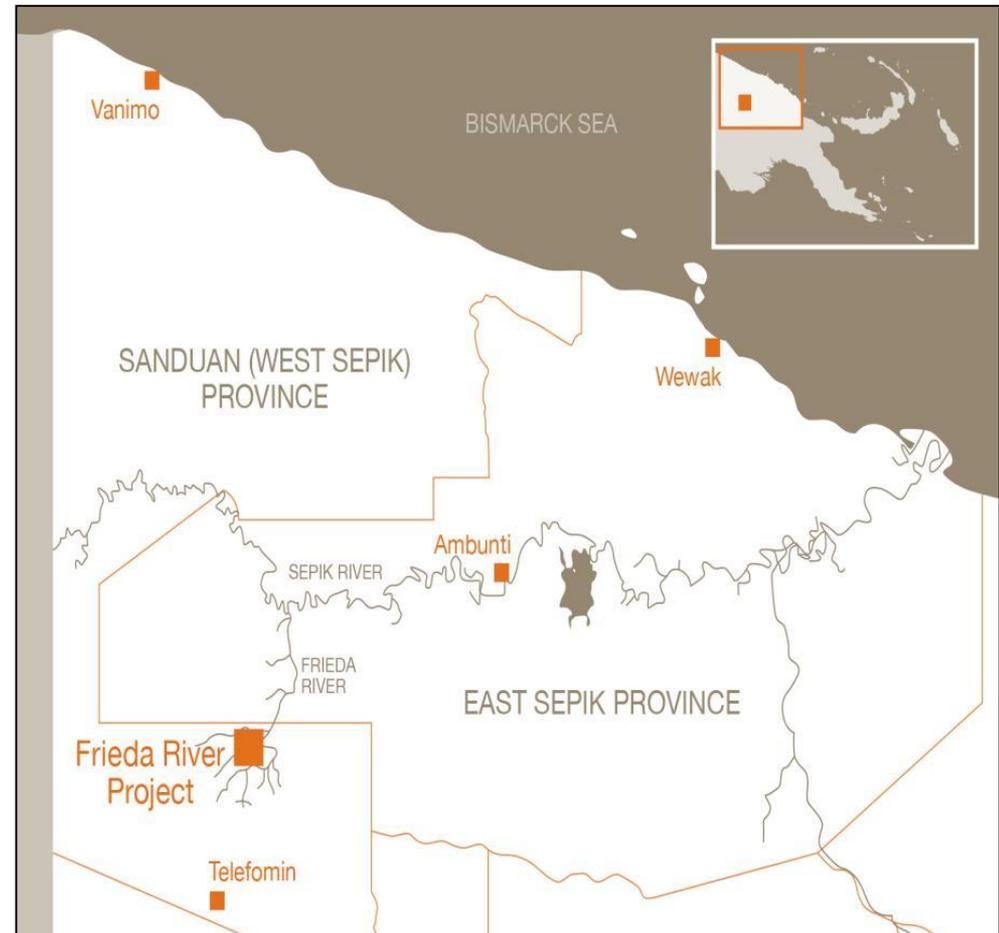


# FRIEDA RIVER



# Progressing through permitting

- **Special Mining Lease application lodged with MRA June 2016**
- **EIS lodged with CEPA Dec 2016**
- **Addendum released March 2017 with enhanced economics**
- **Potential production 2024/25**
- **Funding challenges being addressed**
- **Exploring potential asset value realization options**



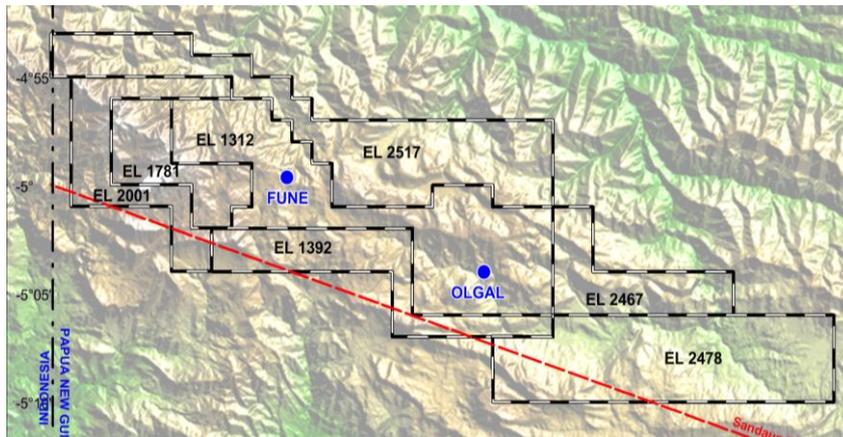
# STAR MOUNTAINS



# Exciting exploration potential



- Anglo American plc paid \$US10 million and committed to earn in.
- Initial JV drilling campaign completed December 2015. Nine holes, 5387m.
- Second campaign completed Sept qtr 2017. Seven holes, 5620m
- Results to date include:
  - At Fune, 15m @ 0.52% Cu, 0.21g/t Au, **from surface**
  - 33m @ 0.62% Cu, 0.20g/t Au, from 114m
  - At Olgal: **596m** at 0.61%Cu and 0.85g/t gold, as well as 22m at 1.42%Cu and 0.57g/t gold



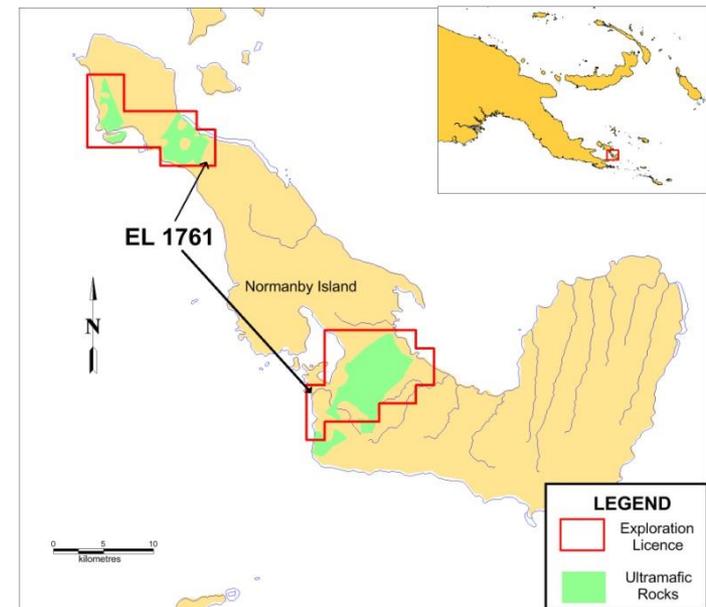
*For full details see ASX releases of June 8, August 28 and September 13, 2017.*

# SEWA BAY



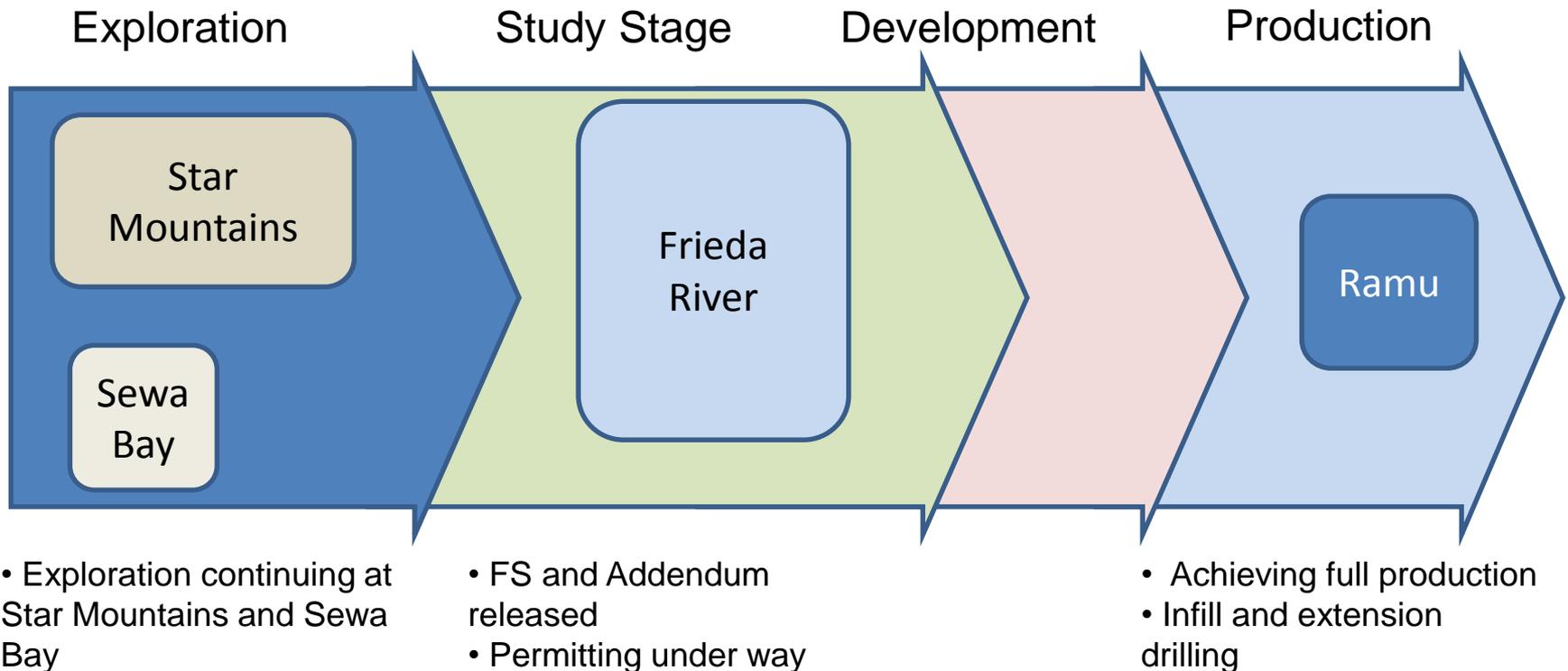
# Nickel laterite exploration upside

- Potential direct-shipping export nickel laterite project
- Exploration partnership with Japanese trading house Sojitz/Pacific Metals
- Positive nickel laterite results from previous drilling campaigns
  - 1.1 metres at 1.61% Ni from surface
  - 1 metre at 1.43% Ni from surface
  - 2.4 metres at 1.42% Ni from surface
  - 1 metre at 1.41% Ni from surface
  - 1.9 metres at 1.4% Ni from surface\*
- LIDAR program completed. Next stage being considered
- Exploration funded by Sojitz/Pacific Metals



\*For full results see ASX announcement of August 18, 2015, entitled "Sewa Bay Update".

# Well established project pipeline



- **Additional projects being actively pursued**
- **Focus on current portfolio commodities**
- **Projects with potential for cashflow generation within near to medium term**



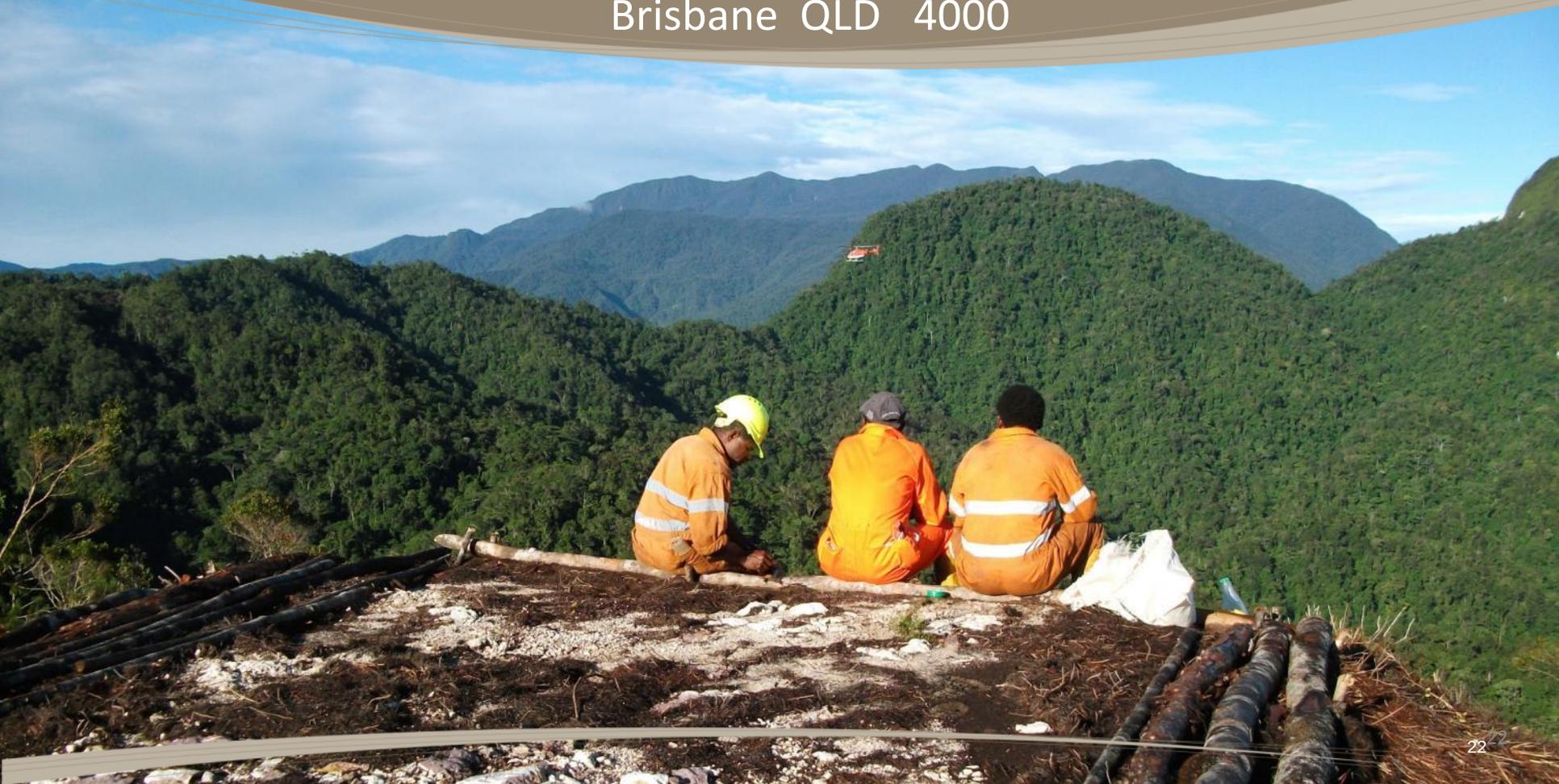
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# Frieda River (HITEK) Resource

The Frieda River Copper-Gold Project exploits the HITEK deposit, which is a large-scale porphyry-style copper-gold deposit with low concentrations of deleterious elements. The Mineral Resource estimates are reported under the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition).

## January 2017 HITEK Mineral Resource

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

*Copper cut-off grade 0.2% (total copper).*

*This Mineral Resource is reported on a 100% ownership basis.*

*May include minor computational errors due to rounding.*

*The HITEK Mineral Resource is constrained within Revenue Factor 1.5 shell, (US\$4.95/lb Cu, US\$2,175/oz Au)*

*"FRL\_HITEK\_V3\_25x25x15\_1608v1e HIT-MII EK-MII\_Shell\_06\_1.5.sft".*

## Competent Person Statement

### Mineral Resources

*The data in this report that relate to Mineral Resources for Frieda River 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.*

*The information on the HITEK Resource is extracted from the report entitled "2017 Horse/Ivaal/Trukai/Ekwai/Koki (HITEK) Deposit Frieda River Mineral Resource and Ore Reserve Statements" created on 24 March 2017 and available on the Company website. No additional resource drilling or modelling has taken place for the HITEK deposit since the 2017 Resource and Reserve Report.*

## Nena Mineral Resource estimate (copper cut-off grade 0.3%)

Category	MT	Cu(%)	Au(g/t)	As(%)	Sb(ppm)
Indicated	33	2.81	0.65	0.22	153
Inferred	12	1.84	0.45	0.14	88
Total	45	2.55	0.60	0.20	136

**Competent Person Statement:** Details contained in this report that pertain to the Nena Resource Estimates are based upon, and fairly represent, information and supporting documents compiled by Mr Paul Gow. Mr Gow is a Member of The Australasian Institute of Mining and Metallurgy and was a full-time employee of Glencore Xstrata plc at the time the estimate was prepared. Mr Gow has sufficient experience which is 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 Gow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information on the Nena Resource is extracted from the report entitled "Frieda – Mineral Resource and Ore Reserve" created on 14 March 2014 and available on the Company website.

# Frieda River (HIT) Ore Reserve

## 2017 HITEK Ore Reserve estimate

Classification	Tonnes (Mt)	Copper (%)	Gold (g/t)
Proved	413	0.54	0.32
Probable	272	0.45	0.21
Ore Reserves	686	0.50	0.28

*The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.*

*This Ore Reserve is reported on a 100% ownership basis.*

*May include minor computational errors due to rounding.*

*The Frieda River Ore Reserve is estimated at commodity prices of US\$3.30/lb copper and US\$1,455/oz gold subject to a floating value<sup>1</sup> based cut-off grade. The representative average copper only cut-off grade is 0.21% copper.*

*<sup>1</sup>Potential mill feed is determined on a net mill value basis and incorporates the influence of metal recovery, ore processing costs and revenue.*

### **Competent Person. 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 a Member and Chartered Professional (Mining) of the Australasian Institute of Mining and Metallurgy (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.*

*The information on the HITEK Reserve is extracted from the report entitled “2017 Horse/Ivaal/Trukai/Ekwai/Koki (HITEK) Deposit Frieda River Mineral Resource and Ore Reserve Statements” created on 24 March 2017 and available on the Company website.*

*Highlands confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Highlands confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement.*

The information on the Horse-Ivaal, Trukai, Ekwai and Koki Resource and the HITEK Reserve is extracted from the report entitled “Feasibility Report Addendum (January 2017) released on 3 March 2017 and available on the Company website. No additional resource drilling or modelling has taken place for the Horse-Ivaal-Trukai, Ekwai and Koki deposits since the release of the Resource and Reserve Report included in the Addendum.

The information on the Nena Resource is extracted from the report entitled “2014 Mineral Resource and Ore Reserve Statements” created on 14 March 2014 and available on the Company website. No additional resource drilling or modelling has taken place for the Nena deposit since the 2014 Resource and Reserve Report

Highlands confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Highlands confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement.

# Ramu Mineral Resource

## Ramu Mineral Resources (at a 0.5% nominal cut-off and excluding oversize (+2mm)). 31 December 2016

Kurumbukari				
Category	MT	Ni(%)	Co(%)	
Measured	37	0.9	0.1	
Indicated	5	1.3	0.1	
Inferred	2	1.2	0.1	
<b>Total</b>	<b>44</b>	<b>0.96</b>	<b>0.1</b>	
Ramu West				
Category	MT	Ni(%)	Co(%)	
Indicated	17	0.9	0.1	
Inferred	3	1.5	0.1	
<b>Total</b>	<b>20</b>	<b>1.0</b>	<b>0.1</b>	
Greater Ramu				
Category	MT	Ni(%)	Co(%)	
Inferred	60	1.0	0.1	
Global Total	MT	Ni(%)	Co(%)	
	124	1.0	0.1	

**Notes:** 1. Totals may not equal the sum of the component parts due to rounding adjustments. 2. Tonnes (dry) represent the -2 mm economic portion of resource mineralization in the rocky saprolite .

**Competent Persons Statement:** The information in this report that relates to Ramu Mineral Resources is based on information compiled by Xiong Xiaofang, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Xiong Xiaofang is a full-time employee of China ENFI Engineering Corporation and has sufficient experience which is relevant to the style of mineralization 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 Xiong Xiaofang consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# Ramu Ore Reserve

## Ramu Ore Reserve. 31 December 2016

Kurumbukari				
Category	MT	Ni(%)	Co(%)	Rocks +2mm MT
Proved	29	0.9	0.1	
Probable	6	1.3	0.1	9
<b>Total</b>	<b>35</b>	<b>1.0</b>	<b>0.1</b>	<b>9</b>

Ramu West				
Category	MT	Ni(%)	Co(%)	Rocks +2mm MT
Proved				
Probable	14	0.9	0.1	
<b>Total</b>	<b>14</b>	<b>0.9</b>	<b>0.1</b>	

Global Total	MT	Ni(%)	Co(%)	
	49	1.0	0.1	9

**Notes:** 1. Totals may not equal the sum of the component parts due to rounding adjustments. 2. Ore tonnes (dry) represent the -2 mm economic portion of resource mineralization. Rock represents an estimate of oversize material (+2 mm) that includes low-grade rocks and rock fragments that occur in the rocky saprolite mineralized zone and are considered as internal waste. The rock will be removed by a simple screening process prior to beneficiation. Accordingly, the ore tonnage is reported after initial screening prior to the beneficiation plant. 3. The Ore Reserve estimate was made using metal prices of US\$17,045/t nickel and US\$25,412/t cobalt. 4. Cut-off grade is variable and equates to 0.58% nickel equivalent, including credit for recovered cobalt metal.

**Competent Persons Statement:** The information in this report that relates to Ramu Ore Reserves is based upon information compiled by Mr Chao An Deng, who is a Deputy Chief Engineer of China ENFI Engineering Corporation and a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Chao An Deng is a full-time employee of China ENFI Engineering Corporation and has sufficient experience relevant to the style of mineralization and type of deposit under consideration 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 (JORC Code)". Mr Chao An Deng consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The following statements apply to the Star Mountains exploration results and exploration targets: (1) Mineralised intersections are quoted as down hole widths. The porphyry mineralisation occurs as disseminations and vein stockworks. Drill intersections described in this report are based on core lengths and may not reflect the true width of mineralisation. (2) Collar locations are in UTM Zone 54 co-ordinates using the ADG66 horizontal datum. (3) Drill core is PQ, HQ or NQ size. (4) Assays were carried out on half sawn core. The half core is crushed and pulverized to ~ 180 mesh. 200 gram samples are used for assay. QAQC control samples make up approximately 10% of each batch sent for analysis. The unused half core is stored on site. (5) Samples were analysed at ALS-Chemex in Townsville. Gold is by 50g fire assay and copper by ICP-AES on an aqua regia digest. Samples assaying greater than 0.5% Cu are re-assayed using an ore grade method suitable for higher grade samples. (6) Hole positions are based on surveys of the drill pad. Actual collars are within 10m of stated locations. (7) Copper equivalent calculations represent the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage. These results are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result, nor metallurgical flowsheet considerations. However it is the Company's opinion that elements considered here have a reasonable potential to be recovered as evidenced in similar multi-commodity natured porphyry mines elsewhere in Papua New Guinea. The copper equivalent calculation is intended as an indicative value only. Copper equivalent conversion factors and long-term price assumptions are as follows: Copper Equivalent Formula=  $Cu \% + Au(g/t) \times 0.53$ ; Price Assumptions- Cu (US\$4/lb), Au (US\$1400/oz).

The following statements apply to the Sewa Bay exploration results:

- (i) Mineralised intersections are quoted as down hole width.;
- (ii) The auger holes were sampled using 1m sample lengths. The entire sample was submitted for assay.
- (iii) Locations are in UTM Zone 56 co-ordinates using the AMG66 horizontal datum.
- (iv) Samples were analysed at ALS-Chemex in Townsville. Nickel, cobalt and magnesium by ICP-AES on an aqua regia digest. Samples assaying greater than 1.0% Ni are re-assayed using an ore grade method suitable for higher grade samples.
- (v) Sample locations are based on GPS survey. Actual collars are within 10m of stated locations.

The Potential quantity and grade related to Exploration Targets in this presentation is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource. These exploration target tonnes and grade ranges are considered realistic because they are well within the typical size and grade ranges expected for porphyry copper deposits in this and other south west Pacific island arcs, and are consistent with data for the known porphyry copper deposits already located in Highlands' Star Mountains tenements.

**Competent Persons Statement:** The exploration results and exploration targets reported here are based on information compiled by Mr L.D. Queen who is a member of the Australasian Institute of Mining and Metallurgy, and who was an employed by Highlands Pacific Limited, now a consultant to Highlands Pacific. Mr Queen has sufficient experience relevant to the style of mineralisation and the type of deposit under consideration, and to the activity which he is undertaking, to qualify as a Competent Person as defined in the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, The JORC Code 2012 Edition". He consents to the inclusion in the report of the matters based on the information compiled by him in the form and context in which it appears.



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