

Savannah Feasibility Study Optimisation Robust economics at spot commodity prices

Highlights

- **Substantially lower life-of-mine cash costs:**
 - C1 cash costs - US\$1.60/lb or A\$2.10/lb (nickel in concentrate after by-product credits)
 - Operating cash costs - US\$2.40/lb or A\$3.10/lb (payable nickel after by-product credits)
 - Sustaining cash costs - US\$3.40/lb or A\$4.50/lb (payable nickel after by-product credits)
- **Estimated funding requirement of less than A\$40M and pre-production capital of A\$20M**
- **Higher annual metal in concentrate production:**
 - 11,000t nickel
 - 5,800t copper
 - 760t cobalt
- **Mine life - approximately 8.5 years**
- **Life-of-mine metal in concentrate production*:**
 - 93,800t nickel
 - 49,100t copper
 - 6,500t cobalt
- **Savannah site being maintained on full care and maintenance to facilitate rapid restart**
- **Productivity improvements are being pursued targeting a further step-change in costs**

Panoramic's Managing Director, Peter Harold said "The release of the Savannah FS Optimisation demonstrates the potential for Savannah to be a financially robust project, even at today's historically low nickel prices. The optimisation work focussed on higher production rates, higher grade ore and lower input costs. This has resulted in an improved mine plan compared to the February 2017 Feasibility Study, and has delivered significantly lower C1 cash costs and all-in sustaining costs. The optimisation work is a credit to the dedicated team at Panoraminc. The short lead time and minimal capital investment required to resume operations places Panoraminc in an enviable position compared with greenfield project developers, who typically have much greater funding requirements and longer pre-production development timeframes.

Savannah's significant cobalt Resource is an important contributor to project value, with production forecast to average 760t per year. A range of investment banks consider that the strong appreciation in the US\$ cobalt price during 2017 is the beginning of a long-term trend, supported by expected growing demand from the battery market, coupled with geopolitical risks associated with a large portion of existing cobalt supply. As a potential near-term cobalt producer, Panoraminc is well placed to capitalise on the buoyant cobalt price outlook."

*Approximately 1.1% of nickel in the production target is from material classified as Inferred Resource. The maximum annual proportion of contained nickel derived from Inferred Resources is 2.4%, four years after commencement of mining.

Cautionary Statement

There is a low level of geological confidence associated with Inferred Mineral 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.

Summary

Panoramic Resources Limited (“**Panoramic**”, **ASX Code: PAN**) is pleased to provide the results of the optimisation of the February 2017 Savannah Feasibility Study (refer to the Company’s ASX announcement of 2 February 2017). The Savannah FS Optimisation demonstrates that through a combination of modifications to the mine schedule, a range of cost initiatives, and favourable by-product credits, the Savannah Operation is financially viable at current US\$ commodity prices and US\$:A\$ FX rate. The key physicals from the Savannah FS Optimisation and comparison with the February 2017 Savannah Feasibility Study (“Feasibility Study”) are summarised in Table 1.

Table 1 – Resource and Production Summary

Operating Metric	February 2017 Savannah Feasibility Study	July 2017 Savannah FS Optimisation
Mineral Resource	13.9Mt @ 1.63% Ni, 0.75% Cu and 0.11% Co for 226,400t nickel, 104,700t copper and 15,300t cobalt	
Mine Production	8.25Mt @ 1.38% Ni, 0.65% Cu and 0.09% Co for 114,000t nickel, 53,700t copper and 7,700t cobalt	7.59Mt @ 1.42% Ni, 0.68% Cu and 0.10% Co for 108,100t nickel, 51,300t copper and 7,200t cobalt
Mine Life	10.25 years	8.5 years
Life-of-mine metal in concentrate production	99,200t Ni, 51,500t Cu and 6,900t Co	93,800t Ni, 49,100t Cu and 6,500t Co
Average annual metal in concentrate production	9,700tpa Ni, 5,000tpa Cu and 670t Co	11,000tpa Ni, 5,800tpa Cu and 760t Co

The Mineral Resources quoted in Table 1 are for the entire Savannah Project (Savannah, Savannah North and Copernicus), and have been previously reported by Panoramic (refer to the Company’s ASX announcement of 24 August 2016).

As with the Feasibility Study, the Savannah FS Optimisation is based on mining the remaining Ore Reserve at Savannah, whilst developing across to the Savannah North deposit. The proposed access method and development timeframe for Savannah North are unchanged from the Feasibility Study, i.e. via decline from the existing Savannah decline at the 1440 Level, with access development from Savannah to first ore at Savannah North scheduled to take approximately nine months.

Optimisation of the mine plan has focused on increasing both the mining rate and the mined nickel grade, resulting in the following amendments:

- Boggging rates in Savannah North have been increased from 1,000t per day to 1,200t per day by utilising remote technology to bog over shift change;
- Accelerated production in the early years, via the inclusion of a vertical pillar in the upper portion of Savannah North, which facilitates the development of a 2nd mining front; and
- Removal from the mine plan of lower grade stopes (0.8 – 1.0% Ni) on the western side of the Upper Zone. This results in approximately 750,000t of material grading 0.9% Ni being removed from the mine plan. It is important to note that this material is not sterilised and remains accessible for mining at higher nickel prices.

The above changes to the mine plan result in a shorter mine life of 8.5 years compared to the Feasibility Study, but with an ore mining rate over LOM averaging 0.9Mtpa (Feasibility Study LOM average 0.8Mtpa).

The recent and on-going mineralogical and metallurgical testwork programs on Savannah North samples, simulating existing Savannah process plant conditions, is confirming that Savannah North has similar processing properties to the Savannah ore treated over the past 12 years. For the Savannah FS Optimisation, a bulk Ni-Cu-Co concentrate targeting a higher grade of 9% Ni is assumed (Feasibility Study assumed 8% Ni). Processing metal in feed recoveries over life of mine are expected to average 87% Ni, 96% Cu and 90% Co, based on historic Savannah plant performance for the targeted concentrate grade. **Metal in concentrate production is forecast to average 11,000t Ni, 5,800t Cu and 760t Co per year with 93,800t Ni, 49,100t Cu and 6,500t Co in concentrate produced over life of mine.**

The Savannah FS Optimisation forecasts a low up-front capital investment of only \$20 million to resume production, unchanged from the Feasibility Study estimate. The low restart cost is due to the mine development already in place to access existing Savannah ore and the existing mobile equipment fleet, processing plant and supporting infrastructure at Savannah being kept in good condition under care and maintenance since the suspension of mining operations in May 2016. Maximum funding requirement is estimated to be under \$40M (inclusive of working capital requirements and no contingency), peaking 14 months after recommencement of production. Indicative term sheets provided by potential financiers have demonstrated that a range of funding options is available for the project.

Forecast average operating cash costs of US\$2.40/lb Ni (payable nickel basis after by-product credits) over the life of the project derived from the Savannah FS Optimisation are significantly lower than the Feasibility Study estimate of US\$3.30/lb. The major contributions to the reduction in payable cash costs are:

- Higher mill throughput and average head grade;
- Owner-operated concentrate transport fleet;
- Improved village catering terms;
- Hybrid solar-diesel power; and
- Uplift in by-product credits due to the strong appreciation in the US\$ cobalt price.

Panoramic is in discussions with a number of potential offtake partners who have expressed an interest in securing Savannah concentrate. The Savannah FS Optimisation incorporates revised offtake terms based on indicative term sheets received to date.

Table 2 summarises the financial outcomes of the Savannah FS Optimisation, reported at the spot US\$ commodity prices and US\$:A\$ FX rate prevailing on 30 June 2017, compared to the Feasibility Study.

Table 2 - Financial summary for the Savannah FS Optimisation, based on spot US\$ commodity prices and US\$:A\$ FX rate as at 30 June 2017, compared with the Feasibility Study (rounding to two significant figures)

Financial Metrics	Units	February 2017 Savannah Feasibility Study	July 2017 Savannah FS Optimisation	July 2017 Savannah FS Optimisation (Feb-17 FS price deck)
Commodity Price Assumption - Ni	US\$/lb	6.00	4.21	6.00
Commodity Price Assumption - Cu	US\$/lb	2.57	2.68	2.57
Commodity Price Assumption - Co	US\$/lb	14.42	27.50	14.42
US\$:A\$ Exchange Rate Assumption	US\$	0.736	0.769	0.736
Revenue	A\$M	1,500	1,200	1,600
Up-front Capital (pre-production)	A\$M	20	20	20
LOM Capital (inclusive of up-front capital)	A\$M	230	220	220
Operating costs plus royalties	A\$M	960	830	860
Pre-tax cash flow	A\$M	300	120	480
Pre-tax NPV (8% discount rate)	A\$M	190	60	310
IRR	%	115	40	240
C1 cash costs (Ni in concentrate basis)	A\$/lb Ni	2.70	1.80	2.30
	US\$/lb	2.00	1.40	1.70
Operating cash costs (payable Ni basis)	A\$/lb Ni	4.50	3.10	3.60
	US\$/lb	3.30	2.40	2.60
Sustaining cash costs (operating cash costs plus sustaining capital, payable Ni basis)	A\$/lb Ni	6.00	4.50	4.90
	US\$/lb	4.40	3.40	3.60

Panoramic is continuing with assessment of other initiatives which could add significant additional value to the Project, including:

- **Ore passes** – shorter loader tramping distances to increase productivity;
- **Battery loaders** – reduces heat generation and diesel particulate emissions, resulting in lower ventilation and cooling requirements;
- **Surface-operated remote bogging** – reduces manning requirements, continuous bogging;
- **Alternative truck technology** – smaller, lighter units, faster travel times, lower capital and operating costs;
- **Small drive sizes** – reduces waste moved, therefore lower development costs; and
- **Drilling automation** – increases utilisation, improved quality resulting in less rework.

These opportunities will be assessed as part of the next phase of optimisation work due to be completed during the December 2017 quarter. Marketing and financing will also be advanced in the same timeframe.

Details

Project Background

The Savannah Nickel Project is located 240km south of Kununurra in the East Kimberley region of Western Australia, and consists of a nickel sulphide orebody, underground mine, process plant and associated infrastructure. Panoramic was formed in 2001 for the purpose of developing Savannah. Panoramic successfully commissioned the Savannah Project in late 2004, and over a twelve year period, Savannah milled 8.5 million tonnes at an average grade of 1.29% nickel, 0.65% copper and 0.06% cobalt to produce 1.22 million tonnes of concentrate containing 94,600 tonnes nickel, 53,000 tonnes copper and 5,000 tonnes cobalt. In FY2016, Savannah achieved a record year with 9,845 tonnes nickel, 6,011 tonnes copper and 476 tonnes cobalt in concentrate produced. The Savannah Project was placed on care and maintenance in May 2016 pending a sustained recovery in the US\$ nickel price and confirmation that Savannah North was a viable project.

Savannah North was discovered in February 2014, when drill-hole KUD1525, targeting the interpreted fault offset of the main Savannah orebody, intersected 89.3m @ 1.60% Ni, 0.76% Cu and 0.12% Co (*refer to the Company's ASX announcement of 18 February 2014*). Resource drilling commenced in early 2015, and in October 2015 the Company released the maiden Savannah North Mineral Resource estimate of 6.88 million tonnes at 1.59% Ni for 109,600t Ni (*refer to the Company's ASX announcement of 1 October 2015*).

In January 2016, the Company released the results of a Scoping Study on the maiden Savannah North Mineral Resource estimate, which indicated a positive economic outcome given the production, revenue and cost assumptions modelled (*refer to the Company's ASX announcement of 27 January 2016*).

In February 2016, the Company resumed underground drilling at Savannah North with the purpose of infilling and converting areas of Inferred Resource to Indicated category, while also testing for extensions to the Resource both up dip to the east and down dip to the west and north. The program was completed in July 2016 and culminated in the release of an upgraded Savannah North Mineral Resource estimate of 10.27 million tonnes at 1.70% Ni for 175,100t Ni, 74,400t copper and 12,700t cobalt in August 2016 (*refer to the Company's ASX announcement of 24 August 2016*).

On 2 February 2017, the Company announced the results of the Savannah Feasibility Study. The scope of the Study was to evaluate the technical and financial viability of recommencing operations at Savannah, based on mining the remaining Savannah orebody plus the Savannah North deposit. The Base Case for the Study assumed no material changes to recent Savannah mining and processing practices and that the operation would continue to produce a bulk Ni-Cu-Co concentrate sold under similar terms as the current contract with Sino/Jinchuan, which expires in April 2020. Based on the results of the Savannah Feasibility Study, a maiden Ore Reserve for Savannah North, of **6.65Mt @ 1.42% Ni, 0.61% Cu and 0.10% Co for contained metal of 94,500t nickel, 40,900t copper and 6,700t cobalt**, was declared. The Savannah Feasibility Study demonstrated a 10 year mine life, producing approximately **99,200t Ni, 51,500t Cu and 6,900t Co in concentrate** over LOM, with initial (pre-production) capital requirements of \$20M, and payable operating cash costs of US\$3.30/lb (*refer to the Company's ASX announcement of 2 February 2017*).

Optimisation Study Scope

Optimisation of the February 2017 Savannah Feasibility Study commenced on completion of the Feasibility Study, and is continuing. The initial focus of the Savannah FS Optimisation was to address the following key areas:

- **Mining productivity** – identify opportunities to increase production rate and mined nickel grade;
- **Product optimisation** – additional metallurgical testwork to confirm the processing characteristics of Savannah North and the feasibility of producing a bulk concentrate with a higher Ni grade;
- **Cost reduction** – review of major cost centres, particularly regarding power and contractor services;
- **Marketing** – engage with potential off-take partners to receive indicative terms for offtake and project financing; and
- **Financing** – seek indicative term sheets from potential financiers on style and quantum of financing available for the project.

Each of the key study areas is discussed in this announcement.

Mineral Resources and Ore Reserves

Mineral Resources and Ore Reserves previously reported for the Savannah Project, as reported by the Company on 24 August 2016 and 2 February 2017 respectively, were used in the Savannah FS Optimisation.

No New Information or Data

This announcement contains references to exploration results, and Mineral Resource and Ore Reserve estimates, all of which have been cross referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of Mineral Resources and 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.

Mining Productivity

A range of mining productivity initiatives was considered as part of the Savannah FS Optimisation, with the objectives of increasing both the mining rate and the mined nickel grade. Of the initiatives evaluated, three key changes, compared to the Feasibility Study were adopted:

- Boggging rates in Savannah North have been increased from 1,000t per day to 1,200t per day by utilising remote technology to bog over shift change;
- Accelerated production in the early years, via the inclusion of a 20m wide vertical pillar in the upper portion of Savannah North, which facilitates the development of a 2nd mining front; and
- Removal of lower grade stopes (0.8 – 1.0% Ni) on the western side of the Upper Zone. This results in approximately 750,000t of material grading 0.9% Ni being removed from the mine plan. It is important to note that this material is not sterilised and remains accessible for mining at higher nickel prices.

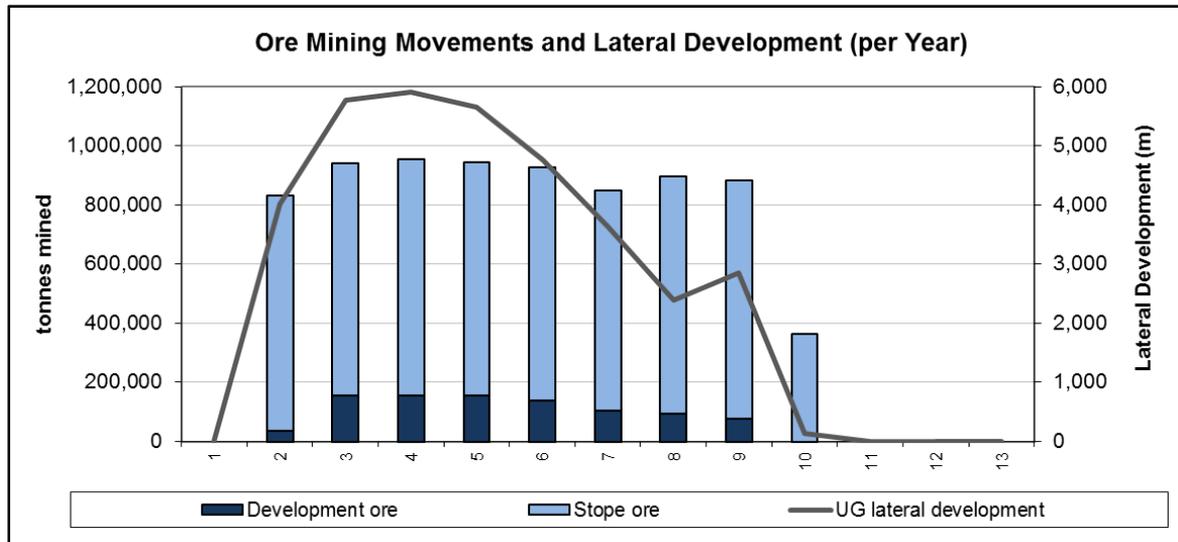
Other mining productivity assumptions, including equipment selection, jumbo development rates, stope designs, and paste fill and curing times are unchanged from the Feasibility Study.

Panoramic's geotechnical consultant (Beck Engineering Pty Ltd) has reviewed the optimised mine plan. The consultant has noted that the vertical pillar may be a source of seismicity/deformation, and that mining conditions in the stopes on the east side of the pillar are likely to worsen as the pillar is approached. Increasing the pillar width may help mitigate the risks.

The above changes to the mine plan result in a shorter mine life of 8.5 years compared to the Feasibility Study, but with an ore mining rate over LOM averaging 0.9Mtpa (Feasibility Study LOM average 0.8Mtpa). Access development from Savannah to first ore at Savannah North is approximately nine months, and full production from Savannah North is reached 15 months after commencement of development (unchanged from the Feasibility Study).

The optimised mine plan has a mining production target of **7.59Mt @ 1.42% Ni, 0.68% Cu and 0.10% Co, containing 108,100t Ni, 51,300t Cu and 7,200t Co**. Total ore tonnes mined and development rates are shown in Figure 1.

Figure 1 - Annual mining development and production

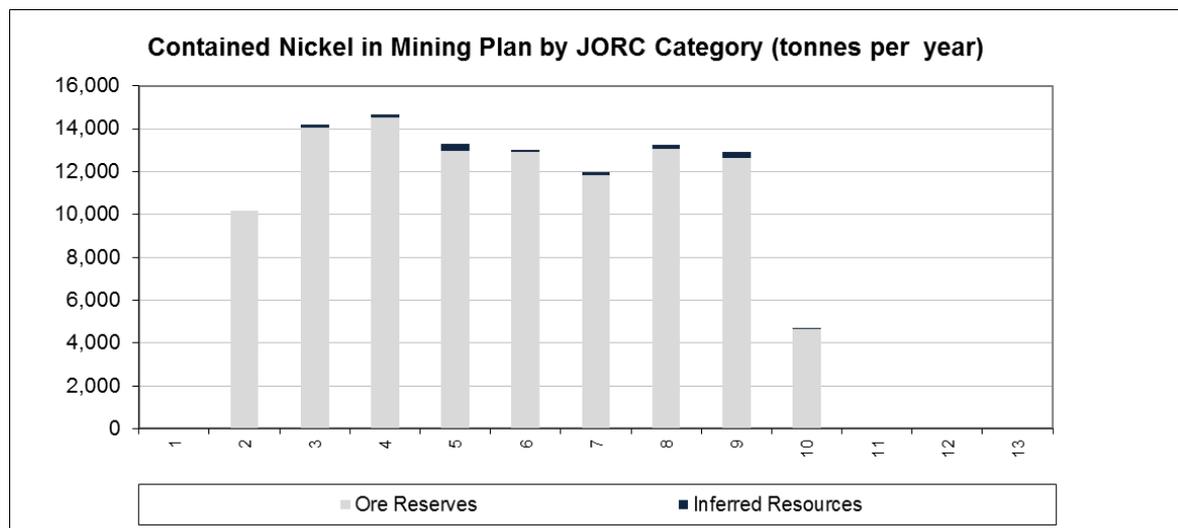


The optimised mining plan includes approximately 1.1% of contained nickel derived from material classified as Inferred Resource (Table 3). The maximum annual contribution of contained nickel derived from Inferred Resources is 2.4%, four years after commencement of mining (Figure 2).

Table 3 - Savannah Optimisation – Mineralised material in the mining plan by JORC category

	Mineralised Material Tonnes	Grade Ni%	Grade Cu%	Grade Co%	Contained Ni Tonnes	Contained Cu Tonnes	Contained Co Tonnes
Ore Reserves	7.53	1.42	0.68	0.09	106,900	50,900	7,100
Inferred Resource	0.06	1.91	0.69	0.13	1,200	400	100
Total	7.59	1.42	0.68	0.10	108,100	51,300	7,200

Figure 2 - Savannah Optimisation – Annual nickel in material mined by JORC category



Cautionary Statement

There is a low level of geological confidence associated with Inferred Mineral 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.

Metallurgy

Objectives of the 2017 Savannah North metallurgical program are to:

- Identify variations in mineralogy or flotation performance requiring separate metallurgical domaining;
- Demonstrate that Savannah North mineralisation performs in a similar manner to the historically treated Savannah ore under typical Savannah plant conditions; and
- Identify alternative processing regimes (i.e. reagent schemes) that may lead to improved recoveries, reduced reagent costs and/or increased concentrate grades.

QEMSCAN™ mineralogical testwork has confirmed that the Savannah North mineralisation is similar to the Savannah ore, i.e. pyrrhotite-dominant sulphides with sub-ordinate pentlandite and chalcopyrite. The mineralogical testwork shows that approximately 85% of the elemental nickel occurs as pentlandite, with around 7% of the nickel occurring as non-sulphide. The remainder of the nickel is assumed to be present in pyrrhotite. Approximately 60% to 75% of the pentlandite occurs in a liberated form, with the less liberated pentlandite mainly locked with pyrrhotite (occurring as fine inclusions, thin or thick flames). The P₈₀ of pentlandite varies between 59µm and 78µm across the sample set. Chalcopyrite has a P₈₀ of about 80µm and about 75 % is classified as 'liberated'; the less liberated chalcopyrite is mainly locked with pyrrhotite and less frequently with pentlandite. Cobalt occurs within the pentlandite, with no discrete cobalt minerals observed in the QEMSCAN™ study.

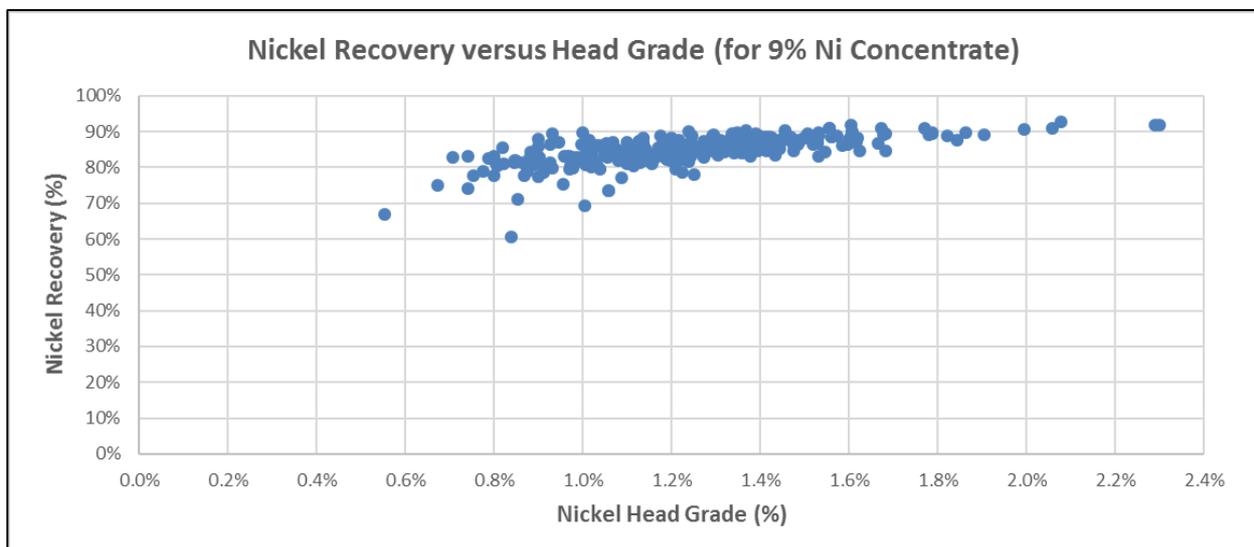
Comminution testwork returned Bond Work Indices ranging from 9.5 to 12.5 (“medium”). SAG mill comminution (SMC) testing showed the Savannah North mineralisation to be “very soft” to “soft”. The softer comminution parameters will provide some scope to either maintain mill throughput while producing a finer grind P₈₀ or alternatively maintain the existing grind P₈₀ at a slightly higher mill throughput.

Flotation testwork is on-going. Testwork conducted to date is indicating that both the Savannah North Upper and Lower Zones are expected to perform within the range of typical Savannah ore performance, and that bulk concentrate grades containing 9% to 11% nickel are achievable.

The current focus of the metallurgical program is to identify alternative processing regimes that may lead to improved recoveries and/or concentrate grades, without modifying plant hardware. The key to improving Ni recovery and grade is the selective depression of pyrrhotite. A range of different reagents and dosages, along with variation of pH levels, are currently under trial.

As the improvement phase of the metallurgical program remains on-going, the grade-recovery relationships based on actual Savannah plant performance derived from processing records for the twelve-year operating period to 2016, were used for the optimisation work. These records demonstrate a consistent relationship between nickel recovery, head grade and concentrate grade. Historical grade-recovery data for the targeted concentrate grade of 9% Ni is shown in Figure 3.

Figure 3 - Historical Savannah plant nickel recovery versus head grade for a concentrate grade of 9% Ni



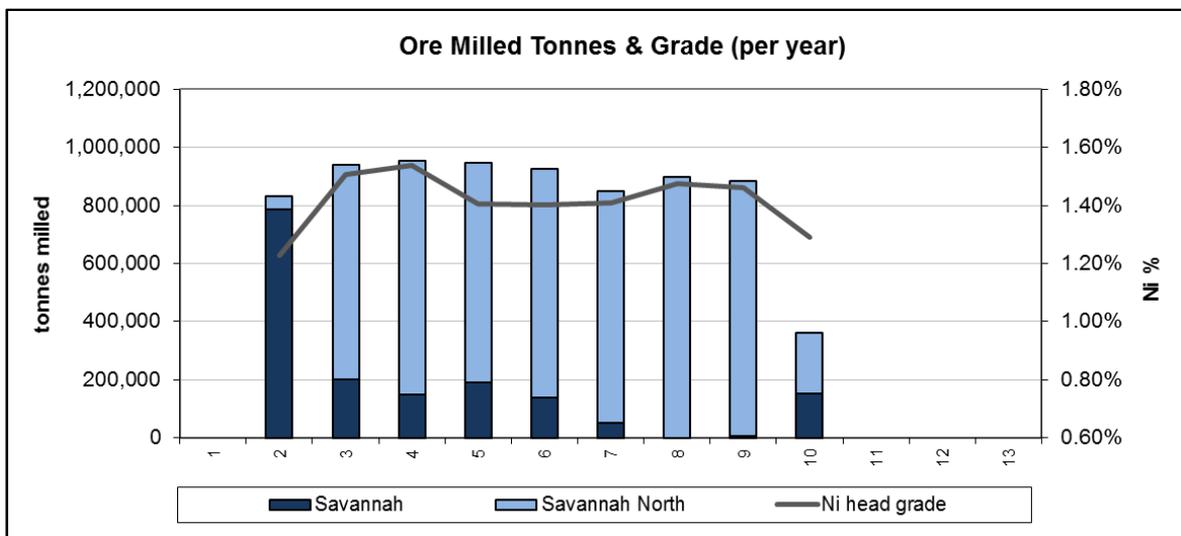
Processing

The Savannah FS Optimisation assumes no change to the existing Savannah processing plant configuration or capacity. The nominal throughput capacity of the Savannah plant is approximately 1.0Mtpa. Between February and May 2016, prior to going into care and maintenance, the Savannah plant was operating between 120tph and 140tph, averaging approximately 130tph (85,000t per month).

For the optimisation work, plant throughput is capped at approximately 80,000t per month (~120tph). Life-of-mine mill throughput averages 0.9Mtpa, up from 0.8Mtpa in the Feasibility Study. Due to changes in mining productivity, the milling profile is smoother over life-of-mine, ranging from 830ktpa in the first year of operation, up to 950ktpa, in the third year. A three-month ramp-up to full production is assumed in the optimised plan.

Life-of-mine nickel head grade for the optimised plan averages 1.42% Ni, with quarterly averages varying from 1.1% Ni to 1.6% Ni. Lower grades are processed in the first year of production, associated with the remnant Ore Reserves at Savannah. The annual milling profile is shown in Figure 4.

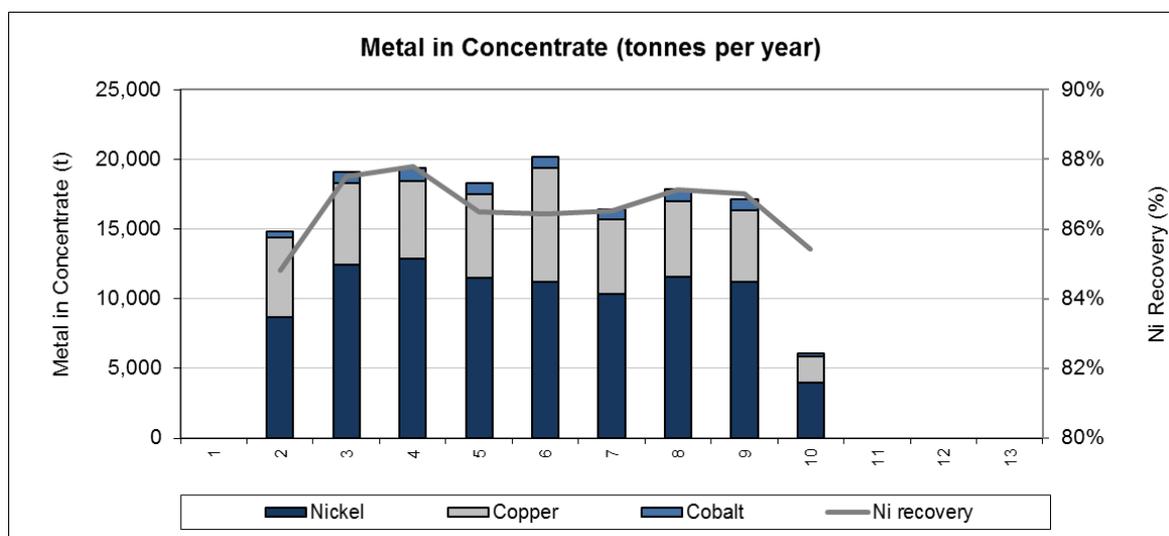
Figure 4 - Savannah Optimisation – Annual production and grade profile



For the Savannah FS Optimisation, the Company is targeting production of a bulk Ni-Cu-Co concentrate with a concentrate grade of 9% Ni. Processing recoveries at the target concentrate grade over life of mine are expected to average 87% Ni, 96% Cu and 90% Co, based on historic Savannah plant performance.

Metal in concentrate production is forecast to average 11,000t Ni, 5,800t Cu and 760t Co per year with 93,800t Ni, 49,100t Cu and 6,500t Co in concentrate produced over life of mine. Annual metal in concentrate production is shown in Figure 5.

Figure 5 - Annual nickel processing recovery and metal in concentrate production



Infrastructure

The existing processing plant and accommodation camp are sufficient for the proposed future operations under the optimised plan.

All infrastructure required for a re-start of operations remains on site and is being maintained by the care and maintenance crews. Major fixed plant and mobile equipment is either ready to be recommissioned or can be at short notice, with refurbishments costed in the financial model. Underground decline and pumping systems have been maintained and operated so that minimal rehabilitation will be required to recommence underground operations.

The major infrastructure works required on a re-start of operations for the optimised case are unchanged from the Feasibility Study, and include: Savannah North decline access development, Savannah North Fresh Air Rise and tailings storage facility wall lift.

The Savannah FS Optimisation includes provision for solar power. A proposal for solar power has been provided by our existing third-party power provider, utilising a 4MW system generating approximately 10% of the life-of-mine power requirement. Modelling assumes the Company will own the solar power infrastructure. Annual savings on power costs of around \$2M are estimated to be achievable, compared with 100% diesel power.

Marketing

The current offtake agreement with Sino/Jinchuan expires in April 2020. Terms under the agreement are confidential.

Panoramic has held further discussions with potential offtake parties including Sino/Jinchuan regarding future concentrate purchases. Indicative terms for bulk concentrate sales have been received from various interested parties and incorporated into the Savannah FS Optimisation financial model.

Marketing activities are on-going.

Capital Costs

Pre-production capital costs in the Savannah FS Optimisation are approximately \$20M, essentially unchanged from the Feasibility Study. Life-of-mine capital expenditure, inclusive of pre-production costs, mining capital development and sustaining property, plant and equipment (PP&E) capital needs, but excluding closure costs, is estimated to be approximately \$220M (Table 4). The estimated annual capital expenditure profile is shown in Figure 6.

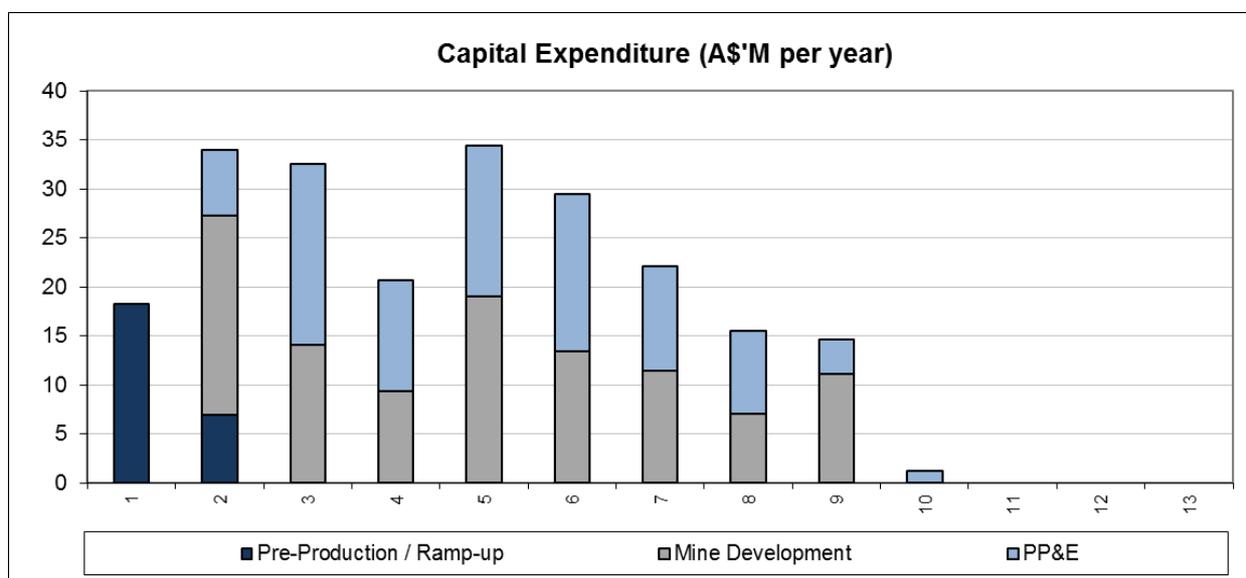
The estimation methodology and cost of most individual capital items largely unchanged from the Feasibility Study. As shown in Table 4, the biggest changes in capital expenditure, compared to the Feasibility study are:

- \$7.5M for solar power plant;
- \$5.2M for concentrate haulage fleet;
- \$7.0M capitalised costs net of capitalised revenue during the three-month production ramp-up phase; and
- \$8.0M reduction in mining capital development.

Table 4 - Savannah FS Optimisation – pre-production, ramp-up, sustaining and LOM capital cost estimates (\$'M).
Amounts are rounded to nearest \$1M.

Description	Pre-production	Ramp-up	Sustaining	Life of Mine
Refurbishment and Restart Capex	10	-	-	10
Initial Store Inventory	2	-	-	2
Capitalised Opex	4	19	-	23
Capital Development	-	3	95	98
Mining – Major Mobile Equipment Purchases	-	-	29	29
Savannah North primary ventilation	2	2	16	20
Tailings facilities construction	-	1	8	9
TSF 1 capping	-	-	7	7
Solar power plant	-	-	7	7
Concentrate haulage fleet	-	-	5	5
Other sustaining capital	-	2	30	32
Capitalised Revenue	-	(20)	-	(20)
TOTAL	18	7	197	223

Figure 6 - Savannah FS Optimisation – Annual capital expenditure profile



Operating Costs

The estimation methodology and unit costs of most individual operating cost items in the Savannah FS Optimisation are also largely unchanged from the Feasibility Study. Unit site operating costs on a per tonne milled basis in the Savannah FS Optimisation are estimated to be \$92/t compared to \$99/t estimated in the Feasibility Study, a reduction of 7% (Table 5). Total life-of mine site-based operating costs in the optimised case are reduced to \$680M, compared to \$800M in the Feasibility Study.

Table 5 - Savannah FS Optimisation – Life of Mine Unit Cash Operating Cost (\$/t milled)

Description	LOM cost per tonne milled (A\$/t)	LOM total (A\$'M)
Mining (including Geology)	56	420
Processing	19	140
Other site costs	17	120
Total	92	680

The major changes impacting operating expenditure, compared to the Feasibility study are annual savings of:

- \$1.3Mpa in concentrate road haulage costs due to owner haulage;
- \$2.1Mpa in power costs due to solar power;
- \$0.4Mpa in village services costs due to more competitive contract pricing;
- \$2.4Mpa in mining costs due to increased mining rate;
- \$1.0Mpa in milling costs due to better plant utilisation; and
- \$20M reduction in general and administrative costs due to the shorter mine life.

Annual unit operating costs per tonne ore milled and total operating costs are shown in Figures 7 and 8.

Figure 7 - Savannah FS Optimisation - Annual unit operating costs per tonne milled

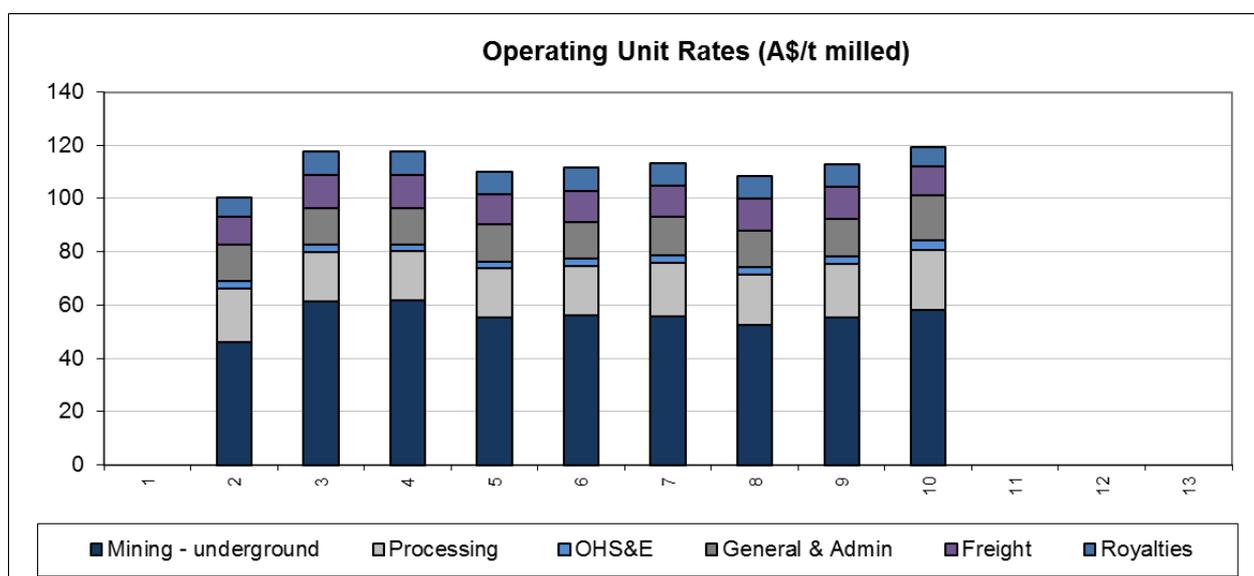
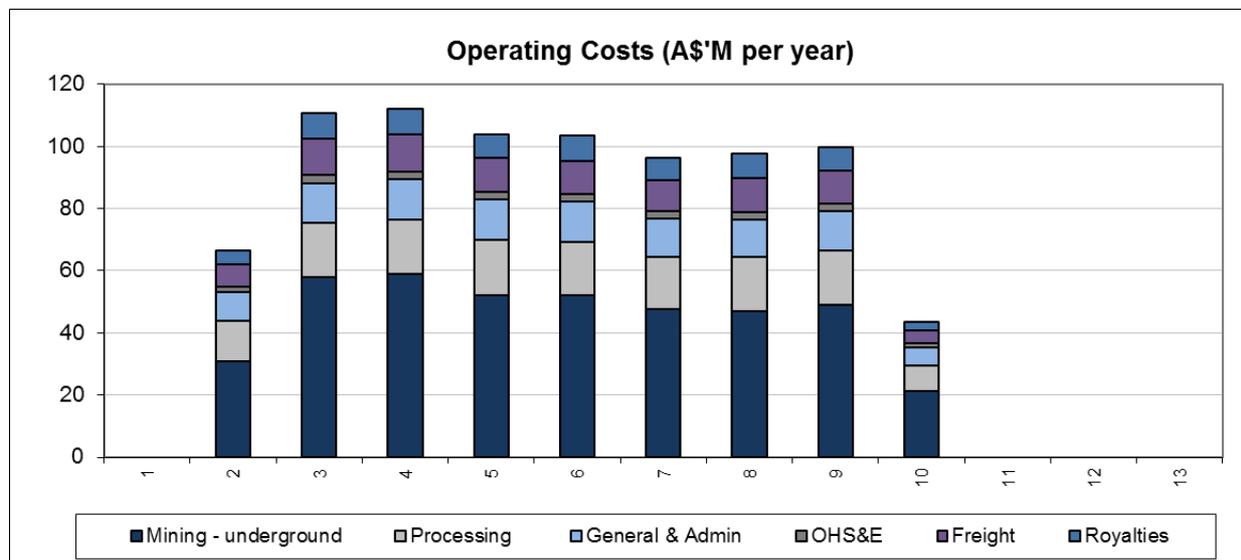


Figure 8 - Savannah FS Optimisation - Annual operating costs



Financial Modelling

Key assumptions

Modelling for the Savannah FS Optimisation was undertaken using monthly physicals and cash flows and includes movements in working capital. For the optimised case financial analysis, **spot US\$ commodity prices and US\$:A\$ FX rate as at 30 June 2017 were used** (Table 6). Modelling has been undertaken on a pre-tax, ungeared, real-dollars basis using a discount rate of 8%. All amounts are expressed in A\$'s unless noted otherwise.

Table 6 – US\$ Commodity price lines and US\$:A\$ FX rate used for the Savannah FS Optimisation, and corresponding values used in the Feasibility Study

Commodity	February 2017 Savannah Feasibility Study	July 2017 Savannah Optimisation
Nickel	US\$6.00/lb	US\$4.21/lb
Copper	US\$2.57/lb	US\$2.68/lb
Cobalt	US\$14.42/lb	US\$27.50/lb
US\$:A\$ FX rate	0.736	0.769
Discount rate	8%	8%

Standardised Reportable Costs

The optimisation work has resulted in a significant reduction in unit costs per pound of nickel, compared to the Feasibility Study results. **Forecast average operating cash costs of US\$2.40/lb Ni (payable nickel basis after by-product credits) over the life of the project derived from the Savannah FS Optimisation are significantly lower than the Feasibility Study estimate of \$US3.30/lb.** In addition to the cost initiatives discussed above, the other significant contributor to the reduction in payable cash costs is the higher US\$ cobalt price, which results in an improved by-product credit attributable to this metal. Standardised reportable costs for the optimised case are shown in Table 7 and Figure 9.

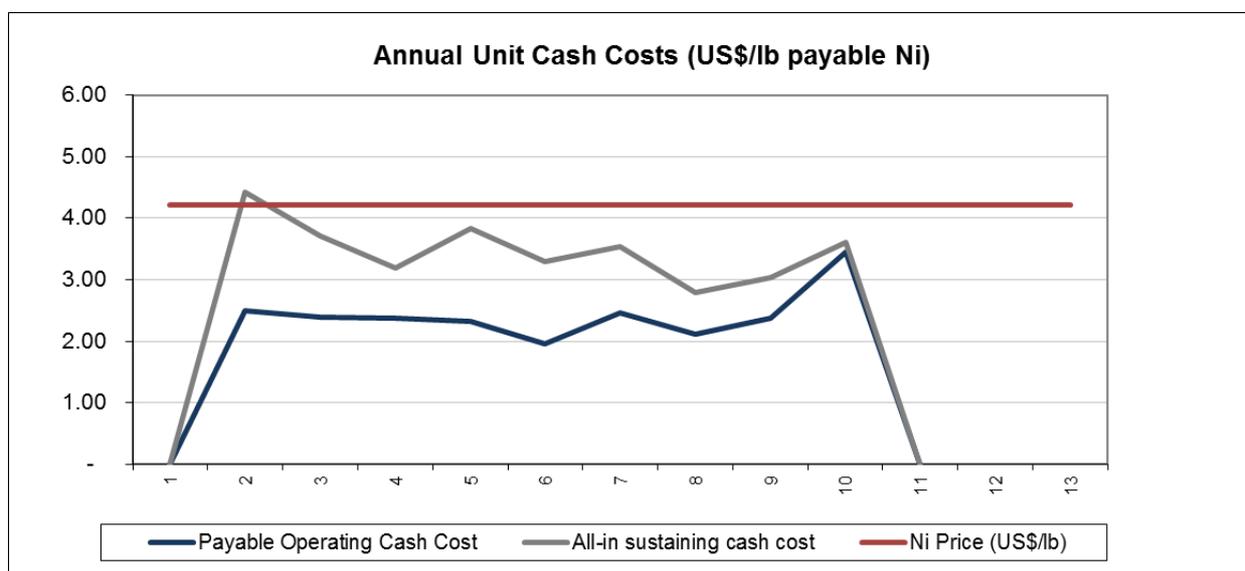
Table 7 – Standardised reportable unit costs for the Savannah FS Optimisation compared with the Feasibility Study (rounding to two significant figures)

Financial Metrics	Units	February 2017 Savannah Feasibility Study	July 2017 Savannah FS Optimisation
C1 cash costs (<i>Ni in concentrate basis</i>)	A\$/lb Ni	2.70	1.80
	US\$/lb Ni	2.00	1.40
Operating cash costs (<i>payable Ni basis</i>)	A\$/lb Ni	4.50	3.10
	US\$/lb Ni	3.30	2.40
Sustaining cash costs (<i>operating cash costs plus sustaining capital, payable Ni basis</i>)	A\$/lb Ni	6.00	4.50
	US\$/lb Ni	4.40	3.40

Definitions:

C1 cash cost:	<i>Operating cash costs including mining, processing, geology, OHS&E, general and administrative, and concentrate transport costs, less by-product credits, divided by nickel in concentrate produced.</i>
Operating cash cost:	<i>Operating cash costs including mining, processing, geology, OHS&E, general and administrative, and concentrate transport costs, plus royalties, less by-product credits, divided by payable nickel produced.</i>
Sustaining cash cost:	<i>Operating cash costs including mining, processing, geology, OHS&E, general and administrative, and concentrate transport costs, plus royalties, plus stay-in-business capital expenditure, less by-product credits, divided by payable nickel produced.</i>

Figure 9 - Annual unit operating and sustaining cash costs (US\$ per pound payable nickel)

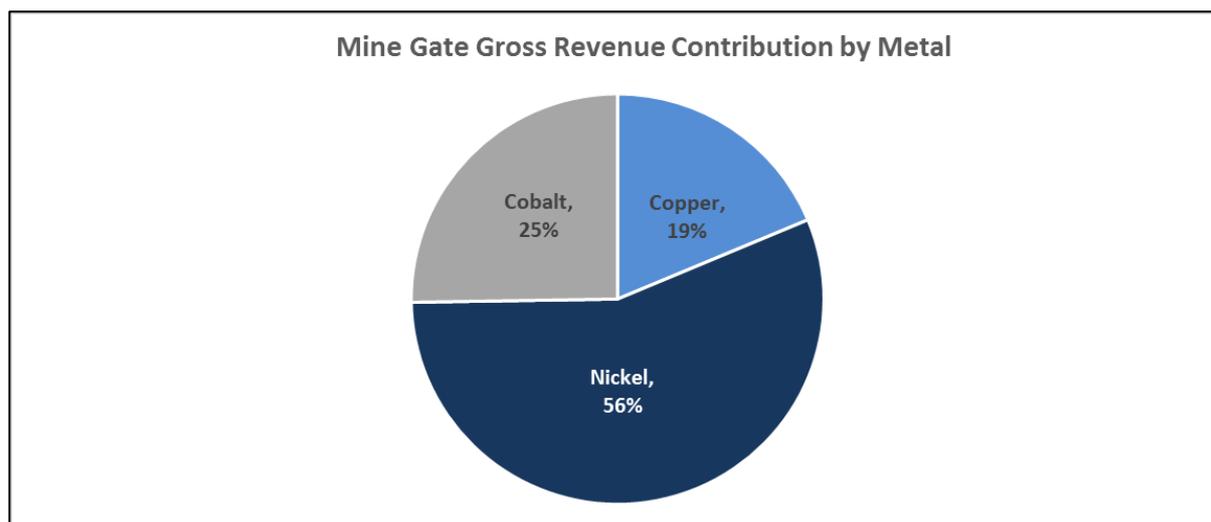


Cash Flow

The optimised Savannah Project shows a positive financial outcome, even at the conservative spot price lines adopted for the optimisation. Revenue is estimated at \$1,200M over life of mine, or ~\$140M on an annual basis over the 8.5 year period of production. EBITDA is \$340M over life of mine, or ~\$40M per annum. **Undiscounted pre-tax free cash flow over life of mine is \$120M.**

In the optimised case, **cobalt is an important contributor to revenue, comprising 25% of gross (mine gate) revenue, over life-of-mine (Figure 10).**

Figure 10 – Percentage contributions to gross (mine gate) revenue of nickel, copper and cobalt



At the spot price lines assumed for the Savannah FS Optimisation, **maximum cash draw down is under \$40M**, which occurs 14 months after commencement of production. The Project becomes cash flow positive 15 months after recommencement of production and **project payback is achieved less than three years after the commencement of production.**

Pre-tax NPV at 8% discount rate is \$60M, and due to the low up-front capital requirements and rapid restart timeframe, the **IRR is 40%.**

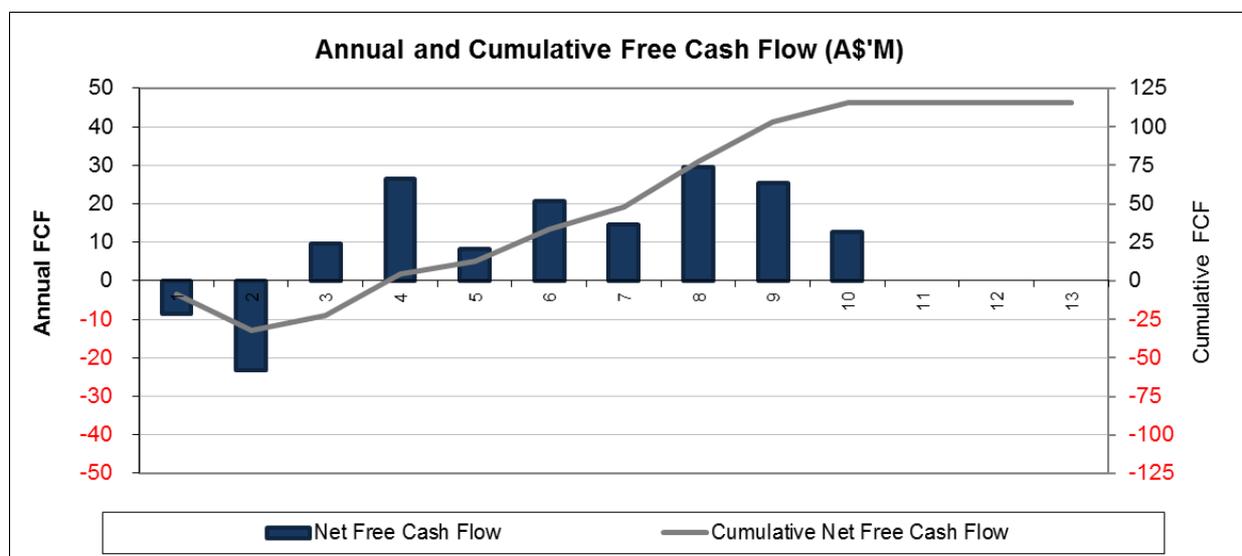
At the assumed by-product US\$ commodity price lines and US\$:A\$ FX rate, the **US\$ nickel price required to achieve cash break-even is US\$3.65/lb**, down significantly from US\$4.40/lb in the Feasibility Study.

Key financial metrics are shown in Table 8. Annual and cumulative cash flow is shown in Figure 11.

Table 8 - Key Financial Metrics

Parameter	Savannah FS Optimisation
Revenue	\$1,200M over LOM
EBITDA	\$340M over LOM
Pre-tax cash flow	\$120M over LOM
Pre-tax NPV (8%)	\$60M
IRR	40%
Payback	Less than 3 years
Maximum funding drawdown	Less than \$40M
Cash break-even Ni price	US\$3.65/lb Ni

Figure 11 - Annual and cumulative cash flow at spot US\$ commodity prices and US\$:A\$ FX rate



Sensitivity Analysis

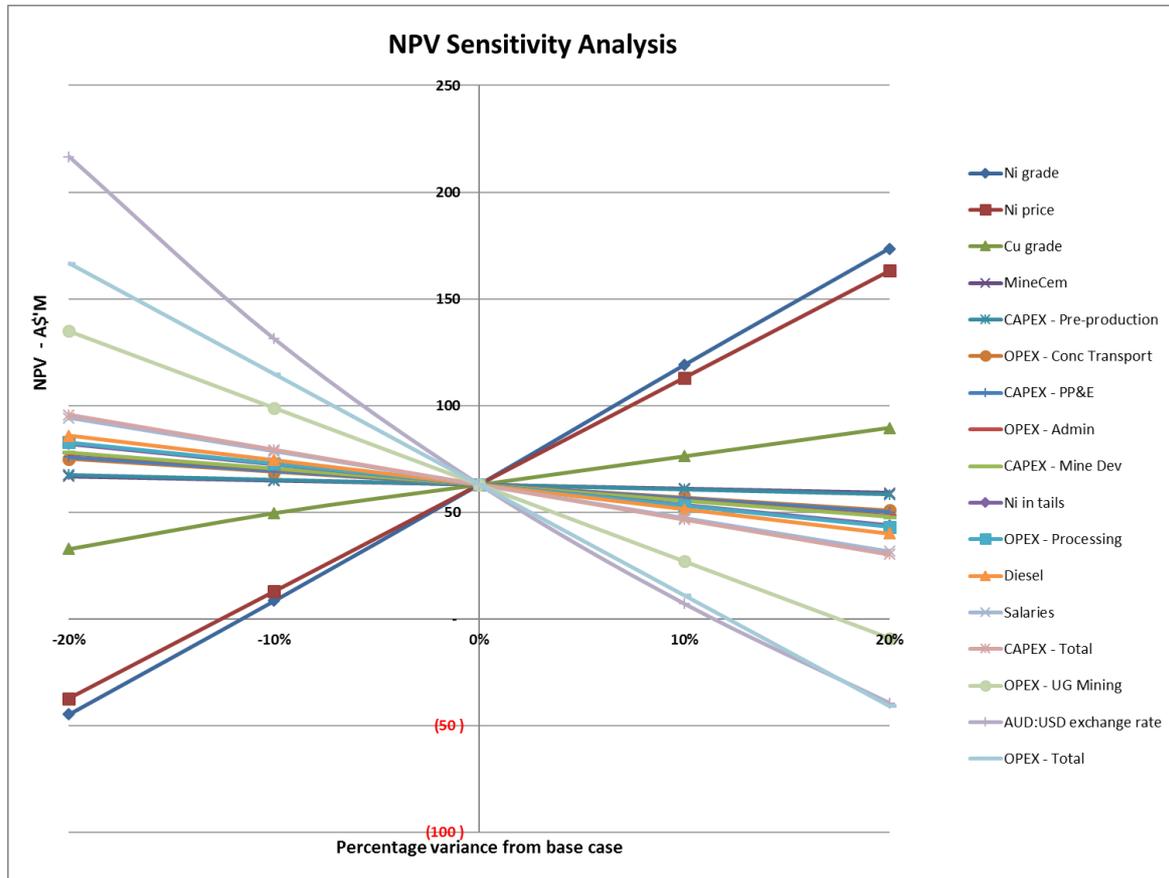
The Savannah FS Optimisation uses an historically low nickel price of US\$4.21/lb, over the 8.5 year life of mine. Importantly, the consensus view of commodity price forecasters is for a return to higher nickel prices, because at current nickel price levels a significant proportion of the world’s nickel producers are cashflow negative, which is unsustainable over the medium to long term. Accordingly, **the Project is strongly leveraged to any future recovery in the US\$ nickel price. At a nickel price of US\$6.00/lb and US\$:A\$ FX rate of US\$0.75, the optimised Savannah Project would have a pre-tax NPV of \$360M.**

Project NPV sensitivities at a range of US\$ nickel price and US\$:A\$ FX rates are shown in Table 9. Sensitivities to a range of internal and external factors for a +/- 20% movement from the Base Case parameters are shown in Figure 12.

Table 9 - NPV sensitivity table for a range of US\$ nickel prices and US\$:A\$ FX rates

Pre-tax NPV ₈ (\$'M)		Nickel Price US\$/lb)				
		4.00	4.50	5.00	5.50	6.00
US\$:A\$ FX Rate	0.60	186	280	403	509	592
	0.65	129	217	329	427	504
	0.70	81	162	266	357	429
	0.75	38	114	212	297	363
	0.80	2	73	164	244	306

Figure 12 – Sensitivity of NPV to a range of internal and external factors.



Funding Requirements

A funding requirement (i.e. maximum negative cash draw down) of approximately \$36M inclusive of working capital, but excluding contingency, is estimated for the price lines modelled, peaking 14 months after commencement of production.

The Company is currently in discussions with a range of potential financiers including offtake partners, traditional resource banks and other resource financing organisations. Indicative financing proposals have been received covering a variety of funding options, including:

- Traditional bank resource project financing;
- Offtake financing / prepayments; and
- Streaming mechanisms.

The Company is working through the range of financing options to determine the optimal quantum and structure. As a result of the level of interest received to date, the Company is confident that appropriate financing will be available for the project at the current US\$ commodity prices and US\$:A\$ FX rate. Financing activities are on-going.

Identified Risks

A number of project risks were identified as part of the Feasibility Study (*refer to the Company's ASX announcement of 2 February 2017*). Of the risks identified, the Company considers the following to be the most significant:

- Delays in access development and/or establishment of the Savannah North ventilation circuit, impacting on the transition from Savannah to Savannah North production; and
- US\$ commodity prices and US\$:A\$ FX rate.

The Company adopted conservative lateral and vertical development rates in its studies, which are below current Australian best practice for these activities. In 2015, the Company developed the 1570 Exploration Drill Drive to Savannah North, without experiencing development problems or delays due to ground conditions. In the event that access to Savannah North is delayed, additional remnant ore at Savannah would be available to maintain milling activities, both from material already in the mining plan, and additional ore sources below the 900 Fault which are currently excluded from the mining plan.

An independent geotechnical assessment of the ground conditions at the location of the proposed Savannah North Fresh Air Rise concluded that apart from the weathered top 35m, ground conditions were favourable for the development of the vent rise. In the event of delays to establishing the Savannah North ventilation circuit, alternative ventilation strategies would be implemented.

Commodity price volatility and US\$:A\$ FX rate risks are proposed to be managed using appropriate levels of hedging.

Panoramic notes that the strong appreciation in the US\$ cobalt price over the past six months has an important positive impact on the Savannah Project economics. In this regard, the Company is exploring options to lock in this value.

Productivity Improvements

The Feasibility Study and the Savannah FS Optimisation reported here have maintained a conservative approach, generally adopting conventional mining and processing approaches, established and proven at Savannah over the 12 years of operations. As a result, the Company has a high level of confidence in the ability to deliver the Savannah FS Optimisation outcomes.

During the Savannah FS Optimisation process, Panoramic identified a number of opportunities to provide step-changes in productivity and cost reduction. These opportunities involve the adoption of new and emerging technologies, and include:

- **Ore passes** – shorter loader tramming distances to increase productivity;
- **Battery loaders** – reduces heat generation and diesel particulate emissions, resulting in lower ventilation and cooling requirements;
- **Surface-operated remote bogging** – reduces manning requirements, continuous bogging;
- **Alternative truck technology** – smaller, lighter units, faster travel times, lower capital and operating costs;
- **Small drive sizes** – reduces waste moved, therefore lower development costs; and
- **Drilling automation** – increases utilisation, improved quality resulting in less rework.

More work is required to advance these opportunities to Feasibility Study standard. These opportunities will be assessed as part of the next phase of optimisation work due to be completed during the December 2017 quarter.

Cobalt Market

The strong appreciation in the US\$ cobalt price over the past six months has an important positive impact on the Savannah Project economics. Research published by several investment banks indicate this to be a sustainable trend.

Morgan Stanley's research report titled "Commodity Matters, Cobalt, Measured", dated 28 June 2017, provides a detailed analysis of the outlook for the cobalt market. A summary of the key points from this report is quoted below.

Demand

"In 2016, only 7% of the world's cobalt supply (7kt) went to Electric Vehicles. It was Electronics that consumed most cobalt, in rechargeable batteries (40kt). But our Europe automotive analyst, Harald Hendrikse, expects global emissions legislation to prompt auto-OEMs to invest in EV production capability in coming years, forecasting 9.4 million EV sales by 2025 (Autos & Shared Mobility: One billion BEVs by 2050? 5-May-17). This translates to an estimated 63ktpa of additional cobalt demand, as autos pick up the slack from a slowing electronics sector. For cobalt's other applications (superalloys, hard metal), we forecast robust demand growth, with only a minor substitution risk – boosting global demand growth to 6.7%pa compounded annual growth rate (CAGR), out to 2025."

Supply

"As most of cobalt's supply is delivered as a by-product of copper and nickel mining (i.e. 62% of 2016's mined output from DRC alone), the trade features a highly volatile material flow (typical of other by-product markets: lead, silver, molybdenum, rhodium). There are factors constraining supply growth too. A low nickel price is undermining by-product flow (31% total supply), while an Amnesty International report this year on the mining industry's child labour has prompted a 'responsible sourcing' campaign for autos/battery industries. Nevertheless, total supply is responding to the on-going demand growth up-tick, with key expansions by Glencore + Eurasian Resources Group (ERG), both set to commission within two years. We forecast mine supply growth to underperform demand, at 6.6%pa CAGR to 2025."

Price Outlook

"The rise of EVs has prompted us to lift our cobalt price outlook. Small trade deficit for 2017-18 should support the price at \$26-27/lb, above its historical level. Thereafter, new mine supply brings the market closer to balance, undermining the medium-term price. Beyond 2022, another roll-out of EVs sees demand growth outstripping our forecast supply growth, creating a persistent deficit (US\$23/lb, real 2017\$, from 2023)."

Risks to Forecast

Demand – "Battery cost is a critical consideration for auto manufacturers. The cost for a typical 60kWh capacity vehicle is now \$12,000 (\$200/kWh) – against the sub-\$150/kWh (\$9,000/vehicle) said to be needed to make EVs economically viable for the mass market. Our Europe chemicals analyst, Charlie Webb, estimates that batteries make up 37% of EV manufacturing costs; materials account for 60% of battery cell costs; cathodes, 32% (Chemicals: Will Cathode Evolution drive the EV Revolution? 28-Jun-17). The most commonly consumed NMC (lithium-'nickel-manganese-cobalt') battery requires 395g/kWh cobalt, accounting for 20% of the weight of the cathode; 60% of cost. This, together with supply security (dependence on DRC/China) and the cobalt industry's ethical concerns (see Sustainable Cobalt) – is leading end-users to seek to minimize their long-term dependency on cobalt. How? By reducing cobalt content in NMC batteries (shift in the Ni-Mn-Co ratio towards 5:3:2/6:2:2 and ultimately 8:1:1); or by using alternative technologies such as NCA (9% Co). Such shifts in battery technology, rate-of-change, and technological evolution can all potentially alter cobalt's demand growth."

Supply – "The global dominance of DRC mine supply, and of China's refined supply, are a source of concern among cobalt's end-users – particularly auto-OEMs. The DRC's history of power shortages and political conflict are particular issues for the security of cobalt supply. However, in the near term, automakers' attempts to secure long-term supplies from elsewhere presents an upside risk to price, since little growth in mine supply is forecast ex-DRC, much of which is tied to the nickel price outlook."

About the Company

Panoramic Resources Limited (**ASX code: PAN**) is a Western Australian mining company formed in 2001 for the purpose of developing the Savannah Nickel Project in the East Kimberley. Panoramic successfully commissioned the \$65 million Savannah Project in late 2004 and then in 2005 purchased and restarted the Lanfranchi Nickel Project, near Kambalda. In FY2014, the Company produced a record 22,256t contained nickel and produced 19,301t contained nickel in FY2015. The Lanfranchi and Savannah Projects were placed on care and maintenance in November 2015 and May 2016 respectively.

Following the successful development of the nickel projects, the Company diversified its resource base to include platinum group metals (PGM) and gold. The PGM Division consists of the Panton Project, located 60km south of the Savannah Project and the Thunder Bay North Project in Northern Ontario, Canada, in which Rio Tinto is earning 70% by spending up to C\$20 million over five years. Following the ASX listing of Horizon Gold Limited (ASX Code: HRN) in December 2016, the Company's interest in gold consists of an indirect investment in the Gum Creek Gold Project located near Wiluna through its 51% majority shareholding in Horizon.

Panoramic has been a consistent dividend payer and has paid out a total of \$114.3 million in fully franked dividends between 2008 and 2016. At 31 March 2017, Panoramic had \$12.8 million in cash and no bank debt.

The Company's vision is to broaden its exploration and production base, with the aim of becoming a major, diversified mining company in the S&P/ASX 100 Index. The growth path will include developing existing resources, discovering new ore bodies, acquiring additional projects and is being led by an experienced exploration-to-production team with a proven track record.

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No New Information or Data

This announcement contains references to exploration results, and Mineral Resource and Ore Reserve estimates, all of which have been cross referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of Mineral Resources and 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.

Forward Looking Statements

This announcement may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the Countries and States in which we operate or sell product to, and governmental regulation and judicial outcomes. For a more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings. The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.