

17 Jul 2017

## PANORAMIC RESOURCES LTD (PAN)

### Savannah optimisation ready for improved nickel price

Panoramic Resources (PAN) released a positive Feasibility Study (FS) on the potential restart of operations at Savannah back in early February 2017. The FS highlighted a significantly extended mine life for the operations of over 10 years with low restart costs of <A\$20m. However, the current spot nickel price (around ~US\$4.30/lb) is still too low for sustainable operations, in our view. The consensus view is for rising nickel prices, and as prices appreciate we expect the operation will be brought back into production. We would anticipate a short lead time for bulk concentrate production, due to the existing infrastructure already in place and immediate access to ore.

In the meantime, PAN has been busy optimising the project FS, with particular focus on productivity enhancements to lower unit costs, improving bulk concentrate grades and potentially separating the nickel and copper concentrates to improve payable terms. Splitting the bulk concentrate would increase nickel pays and could effectively double copper pays, increasing average annual EBITDA by ~\$16M on our modelling.

In addition, exploration is ongoing to grow the resource base and the Company continues to assess potential financing and offtake options. Results of the optimisation study are expected to be released soon.

### Restart provides nickel, copper and cobalt exposure

Savannah remains on care and maintenance (C&M), and we would estimate the Company cash position to be ~A\$11M, after accounting for C&M, and exploration expenditure. In the MarQ, PAN sold a small bulk concentrate shipment (for a provisional ~A\$460k) and realised some sundry income from the sale of redundant equipment/spares at the mine site.

Savannah, once back in production (assuming improved prices) provides exposure to nickel, copper and cobalt, with the FS highlighting a LOM production target for 99.2kt Ni, 51.5kt Cu and 6.9kt Co. While nickel and copper prices remain generally flat (but showing signs of further recovery), we continue to like the medium and longer term fundamentals for improving prices. In contrast, cobalt prices have been soaring and currently trading around ~US\$27/lb Co. PAN used a cobalt price assumption of ~US\$14/lb Co in its FS, half the recent 12-month high for the metal of ~US\$28/lb Co, which bodes well for some by-product credits down the line (assuming prices hold). The project does remain highly leveraged to nickel price, and with a breakeven nickel price of ~US\$4.50/lb, higher than current nickel prices are required for the decision to mine. However, PAN will be well poised to take advantage of an expected rally in prices over the next 12 months.

### Maintain our Speculative Buy, latest price target of 57cps

Our PAN valuation remains largely unchanged, and we continue to use inputs from the FS, but we have pushed back are anticipated restart of operations to late FY18. Our latest PAN NAV is 67cps (from 71cps) and spot NAV 15cps. We maintain our Speculative Buy with a price target of 57cps (from 65cps).

PAN retains excellent leverage to rising nickel (copper and cobalt) prices and exploration upside remains strong for additional resource growth. Importantly, Savannah North remains open with the potential strike length of the Upper Zone alone some 2km, of which only 35% has been tested by drilling to date.

<b>Share Price</b>	\$0.210
<b>Valuation</b>	\$0.67
<b>Price Target (12 month)</b>	\$0.57

#### Brief Business Description:

Restarting the Savannah nickel mine. Lanfranchi likely to restart only if nickel prices are very strong.

#### Hartleys Brief Investment Conclusion

Effectively beginning a new nickel mine at Savannah, utilising existing infrastructure.

#### Chairman & MD

Brian Phillips (Chairman)  
Peter Harold (MD)

#### Top Shareholders

Zeta Resources 27.0%

#### Company Address

Level 9, 553 Hay St  
Perth, WA, 6000

**Issued Capital** 428.6m  
- fully diluted 435.7m

**Market Cap** A\$90.0m  
- fully diluted A\$91.5m

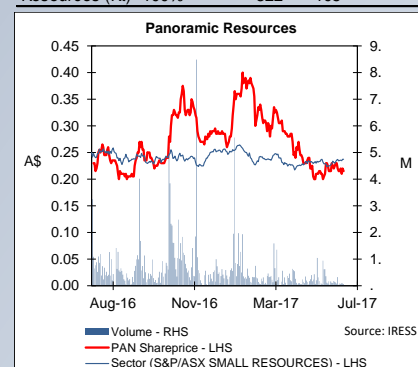
**Cash (est)** A\$11.0m

**Debt (est)** A\$0.0m

**EV** A\$79.0m

**EV/Resource Ni lb** A\$0.11/lb

(A\$m)	FY17e	FY18e	FY19e
Nick Prod (Kt) -pay	0.0	0.4	4.5
Copp Prod (Kt)-pay	0.0	0.1	1.6
Op Cash Flw	-9.6	-13.2	18.2
Norm NPAT	-18.2	-18.9	5.5
CF/Share (cps)	-5.6	-5.9	1.7
EPS (cps)	-7.6	-7.8	2.2
P/E	-3.7	-3.6	12.5
	<b>Ni</b>	<b>Cu</b>	
Reserves (Kt) - 100%	22	12	
Resources (Kt) -100%	322	105	



Mike Millikan

Resource Analyst

Ph: +61 8 9268 2805

E: mike.millikan@hartleys.com.au

Trent Barnett

Head of Research

Ph: +61 8 9268 3052

E: trent.barnett@hartleys.com.au

An analyst has a beneficial interest in PAN.asx.

Panoramic Resources PAN		Share Price \$0.210				
<b>Key Market Information</b>						
Share Price		\$0.210				
Market Capitalisation - ordinary		A\$90m				
Net Debt (cash)		-\$11m				
Market Capitalisation - fully diluted		A\$92m				
EV		A\$81m				
Issued Capital		429m				
Options		7.2m				
Issued Capital (fully diluted inc. all options)		436m				
Issued Capital (fully diluted inc. all options and new capital)		436m				
Valuation		\$0.67				
12month price target		\$0.57				
<b>P&amp;L</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
Net Revenue	A\$m	91.6	0.0	8.3	145.5	
Total Costs	A\$m	-110.8	-13.2	-19.2	-119.9	
EBITDA	A\$m	-19.2	-13.2	-10.9	25.6	
- margin		-21%	-	-131%	18%	
Depreciation/Amort	A\$m	-50.4	-10.4	-12.3	-15.5	
EBIT	A\$m	-69.6	-23.6	-23.2	10.0	
Net Interest	A\$m	-0.9	-0.6	-2.1	-2.8	
Norm. Pre-Tax Profit	A\$m	-70.5	-24.2	-25.2	7.3	
Reported Tax Expense	A\$m	10.5	0.0	0.0	0.0	
Normalised NPAT	A\$m	-65.7	-18.2	-18.9	5.5	
Abnormal / Exploration	A\$m	-78.7	-6.1	-6.3	1.8	
Reported Profit	A\$m	-144.4	-24.2	-25.2	7.3	
Minority	A\$m	0.0	0.0	0.0	0.0	
Profit Attrib	A\$m	-144.4	-24.2	-25.2	7.3	
<b>Balance Sheet</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
Cash	A\$m	19.4	24.7	-20.6	-29.9	
Other Current Assets	A\$m	9.6	1.3	1.8	10.6	
Total Current Assets	A\$m	29.0	26.0	-18.8	-19.2	
Property, Plant & Equip.	A\$m	28.9	28.6	18.4	15.4	
Exploration	A\$m	80.2	80.2	110.2	125.2	
Investments/other	A\$m	2.5	2.5	2.5	2.5	
Tot Non-Curr. Assets	A\$m	111.6	111.3	131.1	143.0	
Total Assets	A\$m	140.6	137.3	112.4	123.8	
Short Term Borrowings	A\$m	0.7	0.7	0.7	0.7	
Other	A\$m	6.9	2.8	3.0	7.2	
Total Curr. Liabilities	A\$m	7.6	3.5	3.8	7.9	
Long Term Borrowings	A\$m	0.9	25.9	25.9	25.9	
Other	A\$m	30.0	30.0	30.0	30.0	
Total Non-Curr. Liabil.	A\$m	30.9	55.9	55.9	55.9	
Total Liabilities	A\$m	38.5	59.4	59.6	63.8	
Net Assets	A\$m	102.2	77.9	52.7	60.0	
Net Debt	A\$m	-17.8	1.9	47.2	56.5	
<b>Cashflow</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
EBITDA		-19.2	-13.2	-10.9	25.6	
Chg working cap		-21.8	4.2	-0.3	-4.6	
Operating Cashflow	A\$m	-40.9	-9.1	-11.2	20.9	
Income Tax Paid	A\$m	0.6	0.0	0.0	0.0	
Interest & Other	A\$m	0.3	-0.6	-2.1	-2.8	
Operating Activities	A\$m	-40.0	-9.6	-13.2	18.2	
Property, Plant & Equip.	A\$m	-9.4	-10.1	-2.1	-12.5	
Exploration and Devel.	A\$m	-7.9	0.0	-30.0	-15.0	
Other	A\$m	16.2	0.0	0.0	0.0	
Investment Activities	A\$m	-1.1	-10.1	-32.1	-27.5	
Borrowings	A\$m	-3.6	25.0	0.0	0.0	
Equity	A\$m	10.1	0.0	0.0	0.0	
Dividends Paid	A\$m	0.0	0.0	0.0	0.0	
Financing Activities	A\$m	6.5	25.0	0.0	0.0	
Net Cashflow	A\$m	-34.6	5.3	-45.3	-9.3	
<b>Shares</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
Ordinary Shares - End	m	428.6	428.6	431.2	435.7	
Ordinary Shares - Weighted	m	338.4	428.6	429.9	433.5	
Diluted Shares - Weighted	m	210.4	435.7	435.7	435.7	
<b>Ratio Analysis</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
Cashflow Per Share	A\$ c¢	-11.8	-2.2	-3.1	4.2	
Cashflow Multiple	x	-1.8	-9.3	-6.8	5.0	
Earnings Per Share	A\$ c¢	-42.7	-5.6	-5.9	1.7	
Price to Earnings Ratio	x	-0.5	-3.7	-3.6	12.5	
Dividends Per Share	AUD	-	-	-	-	
Dividend Yield	%	0.0%	0.0%	0.0%	0.0%	
Net Debt / Net Debt + Equi	%	-21%	2%	47%	48%	
Interest Cover	X	na	na	na	3.6	
Return on Equity	%	na	na	na	9%	
<b>Directors</b>						
Brian Phillips (Chairman)						
Peter Harold (MD)						
Peter Sullivan (Non-Exec Director, Zeta nominee)						
John Rowe (Non-Exec Director)						
Company Information						
Level 9, 553 Hay St						
Perth, WA, 6000						
+61 8 9225 0999						
+61 8 9421 1008						
www.panoramicresources.com						
<b>Top Shareholders</b>						
	M	%				
Zeta Resources	115.7	27.0%				
<b>Reserves &amp; Resources</b>						
	Mt	Ni	Cu	Co	Ni Metal	Attrib.
Savannah Reserve - Total	8.2	1.37%	0.6%	0.09%	0.11	100%
- Savannah North	6.7	1.42%	0.6%	0.10%	0.09	100%
Savannah Resource - Total	13.9	1.63%	0.8%	0.11%	0.23	100%
- Savannah	3.6	1.42%	0.8%	0.07%	0.05	100%
- Savannah North	10.3	1.70%	0.7%	0.12%	0.18	100%
- Copernicus	0.7	1.22%	0.8%	0.05%	0.01	100%
Lanfranchi Resource	5.7	1.69%			0.10	100%
Lanfranchi Reserve	0.2	2.07%			0.004	100%
		Ni %			Mt	
Total Resource	19.5	1.6%			0.322	100%
Total Reserve	8.4	0.3%			0.117	100%
<b>Savannah</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
Ore Milled	Mt pa			0.05	0.60	
Produced Metal Ni	Kt			0.6	7.0	
Payable metal Ni	Kt			0.4	4.5	
Payable metal Cu	Kt			0.1	1.6	
Payable metal Co	Kt			0.0	0.2	
Payable metal Ni eq	Kt			0.5	5.7	
Cost per milled tonne	\$/t			151	114	
EBITDA / tonne milled ore	\$/t			7	55	
Cash Cost inc Royalty + cred	\$/lb Ni eq			8.1	6.0	
Modelled mining inventory	Mt			8.4	8.0	
Modelled mining inventory	%			1.4%	1.4%	
<b>Lanfranchi</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
Ore Trucked	Mt pa				0.23	
Contained Nickel	kt				3.4	
Contained Copper	kt				0.4	
Payable Nickel	kt				2.0	
Payable metal Cu	kt				0.2	
Payable metal Ni eq	kt				2.1	
Cost per "milled" tonne	\$/t				154.9	
EBITDA / tonne "milled" ore	\$/t				8.0	
Operating Cash Cost inc Royalty	\$/lb Ni eq				7.53	
Modelled mining inventory	Mt				1.24	
Modelled mining inventory	%				1.5%	
<b>Group</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
Nickel Production	kt			0.6	10.4	
Payable Nickel	kt			0.4	6.6	
Payable Nickel equiv	kt			0.5	7.8	
Total cash costs	\$/lb Ni eq			17.7	7.0	
Ore "milled"	Mt			0.1	0.8	
Cost per "milled" tonne	\$/t			384.2	145.4	
<b>Price Assumptions</b>						
	Unit	Jun 16	Jun 17	Jun 18	Jun 19	
AUDUSD	A\$/US\$	0.74	0.75	0.75	0.76	
Nickel	\$/US/lb	4.13	4.66	5.23	6.15	
Copper	\$/US/lb	2.21	2.51	2.87	2.88	
<b>Hedging</b>						
		Jun 16	Jun 17	Jun 18	Jun 19	
Hedges maturing?		No	No	No	No	
<b>Sensitivity Analysis</b>						
	Valuation	FY19 NPAT				
Base Case	0.67	5.5				
Spot Prices	0.15 (-76.9%)	-17.0 (-411.2%)				
- Spot USD/AUD 0.78, Ni \$4.32/lb, Cu \$2.68/lb, Co \$26.99/lb						
AUDUSD +/-10%	0.49 / 0.89 (-26.6% / 32.9%)	-4.1 / 17.1 (-175.3% / 214.3%)				
Nickel +/-10%	0.81 / 0.53 (20.8% / -20.6%)	14.1 / -3.2 (157.8% / -157.8%)				
Production +/-10%	0.87 / 0.46 (31.1% / -30.8%)	16.5 / -5.6 (202.9% / -202.9%)				
Operating Costs +/-10%	0.56 / 0.80 (-16.1% / 19.4%)	-2.4 / 13.3 (-144.6% / 144.6%)				
<b>Unpaid Capital</b>						
na						
<b>Share Price Valuation (NAV)</b>						
		Risked Est. A\$m	Est. A\$/share			
100% Savannah (pre-tax NAV at disc. rate of 12%)		303	0.70			
100% Lanfranchi (pre-tax NAV at disc. rate of 12%)		12	0.03			
Other Exploration		24	0.06			
Horizon Gold (HRN) -50%		14	0.03			
Forwards		0	0.00			
Corporate Overheads		-52	-0.12			
Net Cash (Debt)		11	0.03			
Tax (NPV future liability)		-21	-0.05			
Options & Other Equity		0	0.00			
Hedging		0	0.00			
Total		291	0.67			
Analyst: Trent Barnett		Analyst: Mike Millikan		Last Updated: 17/07/2017		
+61 8 9268 3052		+61 8 9268 2805				
Sources: IRESS, Company Information, Hartleys Research						

*Savannah was placed on care and maintenance in May 2016, having been continually operated since commissioning in late 2004*

*Savannah Project is located 240km south of Kununurra in the East Kimberley region of Western Australia*

*Well located just off the Great Northern Highway*

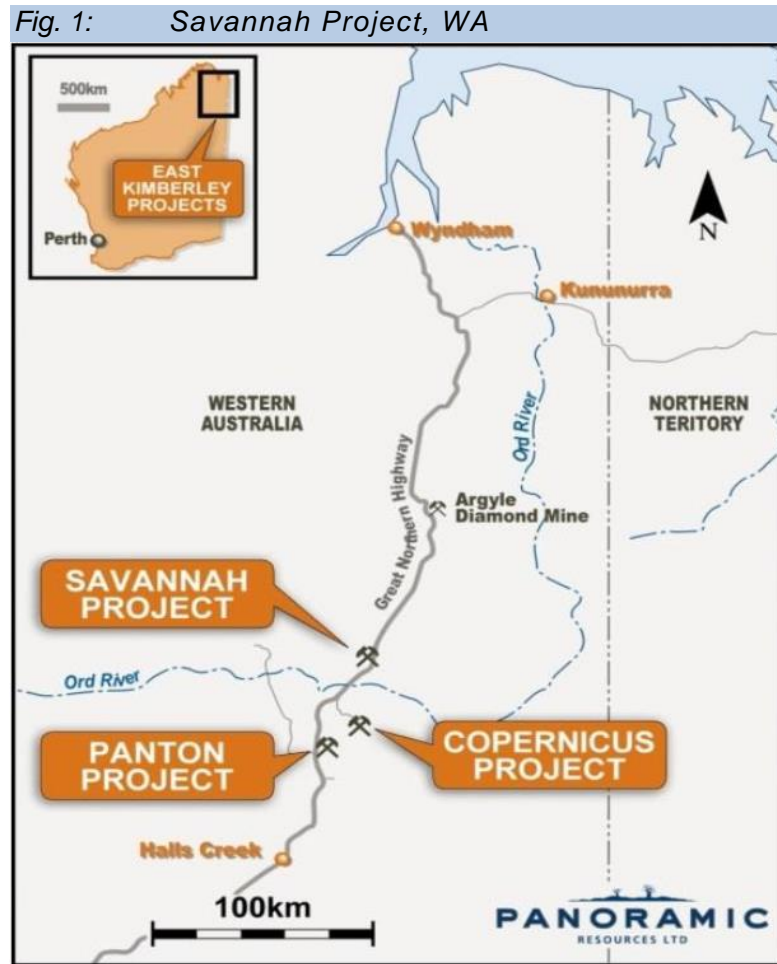
*The exploration potential of the belt remains strong*

*Mineralisation was first discovered in 1973*

*The Savannah North discovery has been a game changer for the restart of operations, located ~500m from existing underground development and adding potential mine life beyond 8 years*

## SAVANNAH - LONG LIFE, LOW RESTART COST

The Savannah Project is located 240km south of Kununurra in the East Kimberley region of Western Australia. The project consists of a nickel sulphide orebody, underground mine, processing plant and associated infrastructure. The mine commenced operation in 2004 and was placed on care and maintenance in May 2016.



Source: Panoramic Resources Ltd

Savannah is a nickel, copper and cobalt sulphide orebody hosted by the layered mafic-ultramafic Savannah Intrusion, which is bound by metasediments and gneisses of the Tickalara Metamorphics. The Savannah orebody is mostly confined to a marginal norite unit up to 40m thick which developed above the base of the intrusion. Areas of massive, matrix and disseminated sulphide mineralisation, dominated by pyrrhotite (Fe), chalcopyrite (Cu), pentlandite (Ni) and minor pyrite (Fe) occur throughout the mafic host.

Mineralisation was first discovered in gossan outcrop over a 250m strike length by Anglo American in 1973. Sally Malay Mining (PAN) acquired the project in 2001 for A\$1.7m and then built and commissioned a processing plant for an initial open pit operation. The cost of the build at the time (2004) was ~A\$65m. At ~500 metres below the surface, a significant sub-horizontal fault, the 500 Fault, cuts the orebody and offsets it some 200m to the northwest. Mineralisation above the 500 Fault is referred to as the "Upper Zone" and below the 500 Fault as the "Lower Zone". Another fault at ~900m below surface cuts and offsets the orebody again with the Lower Zone extended beneath this structure. Mining up until going into care and maintenance was via underground methods (open stoping with paste fill).

*The plant operates ~0.75-1Mtpa and consists of a single stage crusher, SAG mill, flotation, thickening and filtering stages to produce a bulk nickel, copper, cobalt concentrate*

*Recoveries average 86-89% for nickel, 94-97% for copper and 89-92% for cobalt*

*The Savannah FS is currently being optimised*

The Savannah processing plant remains in good condition. The nameplate capacity is 0.75Mtpa, but it has historically operated ~1Mtpa. It consists of a single stage crusher, SAG mill, flotation, thickening and filtering stages to produce a bulk nickel, copper, cobalt concentrate. Recoveries average 86-89% for nickel, 94-97% for copper and 89-92% for cobalt.

Key outcomes of the FS (released Feb 2017) included: a maiden Savannah North reserve of 6.7Mt @ 1.42 Ni, 0.61% Cu and 0.10% Co for 94,500t nickel, 40,900t copper and 6,700t cobalt. The total Savannah reserve is now 8.21Mt @ 1.37% Ni, 0.64% Cu and 0.09% Co for 112,600t nickel, 52,400t copper and 7,600t cobalt.

The study estimates an average plant throughput of 0.8Mtpa over the ~10 year mine life, for annual production of 9.7Kt nickel in concentrate, 5Kt copper in concentrate and 670t cobalt in concentrate. With higher production in the first 5 years (peaking at annual production of 12.3Kt of nickel). The LOM payable cash costs are estimated to be US\$3.30/lb Ni (~A\$4.50/lb Ni) and a payable sustaining cash costs of US\$4.40/lb Ni (~A\$6.00/lb Ni). The study envisages a low pre-production capital expense of ~A\$18m, sustaining capex of ~A\$217m over LOM and a total LOM capex of ~A\$235m.

The Savannah concentrate is contracted for offtake with Jinchuan Group of China until April 2020. The contract is currently suspended while the Project is on care and maintenance, but we understand that the end date (April 2020) is fixed. Opportunities also exist for the production separate concentrates (ie separate nickel and copper concentrates), which should improve payable terms and enhance project economics.

**Fig. 2: Savannah Plant Infrastructure**



Source: Panoramic Resources Ltd

## VALUATION AND PRICE TARGET

### VALUATION

We assume Savannah is restarted in late FY18. We assume payable (average) cash costs of ~A\$6.1/lb. We have rising nickel price assumptions which mean PAN should generate EBITDA ~A\$26m in FY19 and \$56m in FY20.

**Fig. 3: Key assumptions and risks for valuation**

Assumption	Risk of not realising assumption	Risk to valuation if assumption is incorrect	Comment
Rising nickel prices	Moderate	Extreme	We assume rising nickel prices in the near term.
Restart of Savannah and 10 year mine life	Moderate	Extreme	We assume Savannah is restarted, and fed with ore from Savannah North.
Restart of Lanfranchi and 3 year mine life	Moderate	Low	Our Lanfranchi contribution to our valuation is low given we estimate it has high costs.
Exploration upside potential	Moderate	Low	We do not include much exploration potential, mainly to be conservative.
Funding Risk	Moderate	Moderate	We assume that PAN does not require any new equity.

*Conclusion*

*Nickel prices are the biggest risk to our valuation.*

Source: Hartleys Research

### PRICE TARGET

We have a 12 month price target of 57cps (from 65cps), which is a weighted blend of different valuation scenario analysis.

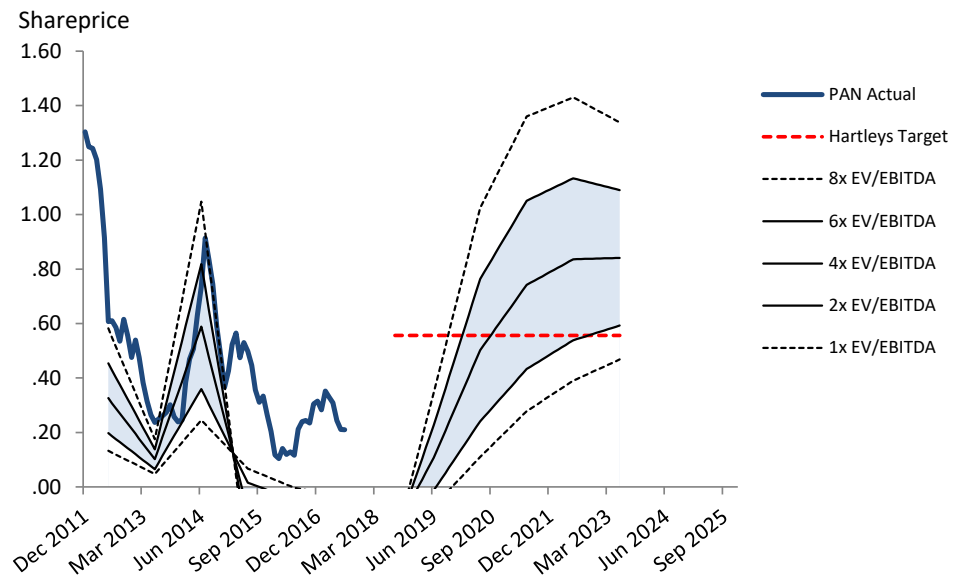
**Fig. 4: PAN Price Target**

Price Target Methodology	Weighting	Spot	12 mth out
NPV Base Case	65%	\$0.67	\$0.78
NPV Base Case at Spot Commodity and FX prices	20%	\$0.15	\$0.19
No development - exploration value	10%	\$0.19	\$0.23
Net Cash	5%	\$0.03	\$0.03
<b>Risk weighted composite</b>			<b>\$0.49</b>
<b>12 Months Price Target</b>			<b>\$0.57</b>
Share price - Last		\$0.210	
<b>12 mth total return (% to 12mth target + dividend)</b>			<b>172%</b>

Source: Hartleys Estimate

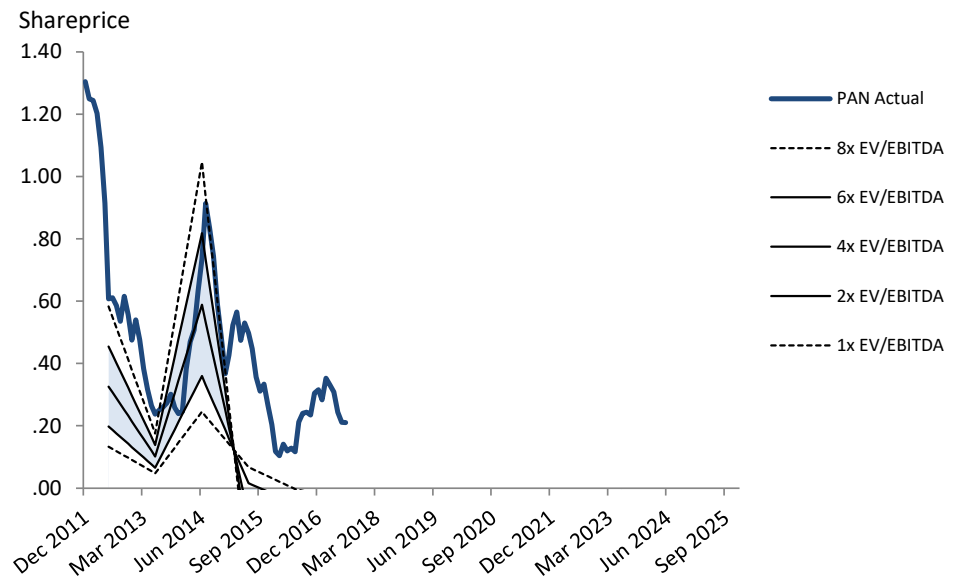
## EV/EBITDA BANDS

**Fig. 5: Using Hartleys base case commodity forecasts**



Source: Hartleys Estimates, IRESS

**Fig. 6: Using spot commodity prices**



Source: Hartleys Estimates, IRESS

# HARTLEYS CORPORATE DIRECTORY

## Research

Trent Barnett	Head of Research	+61 8 9268 3052
Mike Millikan	Resources Analyst	+61 8 9268 2805
John Macdonald	Resources Analyst	+61 8 9268 3020
Paul Howard	Resources Analyst	+61 8 9268 3045
Aiden Bradley	Research Analyst	+61 8 9268 2876
Michael Scantlebury	Junior Analyst	+61 8 9268 2837
Janine Bell	Research Assistant	+61 8 9268 2831

## Corporate Finance

Dale Bryan	Director & Head of Corp Fin.	+61 8 9268 2829
Richard Simpson	Director	+61 8 9268 2824
Ben Crossing	Director	+61 8 9268 3047
Ben Wale	Associate Director	+61 8 9268 3055
Stephen Kite	Associate Director	+61 8 9268 3050
Scott Weir	Associate Director	+61 8 9268 2821
Scott Stephens	Associate Director	+61 8 9268 2819
Rhys Simpson	Manager	+61 8 9268 2851

## Registered Office

### Level 6, 141 St Georges TcePostal Address:

PerthWA 6000 GPO Box 2777  
Australia Perth WA 6001  
PH:+61 8 9268 2888 FX: +61 8 9268 2800  
www.hartleys.com.au info@hartleys.com.au

*Note: personal email addresses of company employees are structured in the following manner:firstname.lastname@hartleys.com.au*

## Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

## Institutional Sales

Carrick Ryan	+61 8 9268 2864
Justin Stewart	+61 8 9268 3062
Simon van den Berg	+61 8 9268 2867
Chris Chong	+61 8 9268 2817
Digby Gilmour	+61 8 9268 2814
Tia Hall	+61 8 9268 3053

## Wealth Management

Nicola Bond	+61 8 9268 2840
Bradley Booth	+61 8 9268 2873
Adrian Brant	+61 8 9268 3065
Nathan Bray	+61 8 9268 2874
Sven Burrell	+61 8 9268 2847
Simon Casey	+61 8 9268 2875
Tony Chien	+61 8 9268 2850
Tim Cottee	+61 8 9268 3064
David Cross	+61 8 9268 2860
Nicholas Draper	+61 8 9268 2883
John Featherby	+61 8 9268 2811
Ben Fleay	+61 8 9268 2844
James Gatti	+61 8 9268 3025
John Goodlad	+61 8 9268 2890
Andrew Gribble	+61 8 9268 2842
David Hainsworth	+61 8 9268 3040
Neil Inglis	+61 8 9268 2894
Murray Jacob	+61 8 9268 2892
Gavin Lehmann	+61 8 9268 2895
Shane Lehmann	+61 8 9268 2897
Steven Loxley	+61 8 9268 2857
Andrew Macnaughtan	+61 8 9268 2898
Scott Metcalf	+61 8 9268 2807
David Michael	+61 8 9268 2835
Jamie Moullin	+61 8 9268 2856
Chris Munro	+61 8 9268 2858
Michael Munro	+61 8 9268 2820
Ian Parker	+61 8 9268 2810
Matthew Parker	+61 8 9268 2826
Charlie Ransom	+61 8 9268 2868
Mark Sandford	+61 8 9268 3066
David Smyth	+61 8 9268 2839
Greg Soudure	+61 8 9268 2834
Sonya Soudure	+61 8 9268 2865
Dirk Vanderstruyf	+61 8 9268 2855
Samuel Williams	+61 8 9268 3041
Jayme Walsh	+61 8 9268 2828

## Disclaimer/Disclosure

The author of this publication, Hartleys Limited ABN 33 104 195 057 ("Hartleys"), its Directors and their Associates from time to time may hold shares in the security/securities mentioned in this Research document and therefore may benefit from any increase in the price of those securities. Hartleys and its Advisers may earn brokerage, fees, commissions, other benefits or advantages as a result of a transaction arising from any advice mentioned in publications to clients.

Any financial product advice contained in this document is unsolicited general information only. Do not act on this advice without first consulting your investment adviser to determine whether the advice is appropriate for your investment objectives, financial situation and particular needs. Hartleys believes that any information or advice (including any financial product advice) contained in this document is accurate when issued. Hartleys however, does not warrant its accuracy or reliability. Hartleys, its officers, agents and employees exclude all liability whatsoever, in negligence or otherwise, for any loss or damage relating to this document to the full extent permitted by law.