

PNX METALS LIMITED (PNX)

Development ready, zinc-gold explorer

PNX Metals Limited (PNX) is developing the Hayes Creek zinc-gold-silver project, and exploring for gold and base metals in the Northern Territory. The 2017 PFS for Hayes Creek sees the Mt Bonnie open pit and Iron Blow underground producing 119kt Zn, 9.3Moz Ag, 95koz Au and 21kt Cu/Pb in recoverable metal concentrates over a 6.5 year life of mine. The Company expects LOM A\$266M in pre-tax net cashflows (excluding capex and exploration). We model ~A\$230M using different commodity price assumptions. PNX is progressing a DFS, which it expects to complete in 2H18 and could be commissioning a mine at Hayes Creek in mid-2020. PNX owns a large package of prospective exploration ground in the NT and has a pipeline of interesting exploration targets to test in 2018. We particularly like the look of the Moline project where a number of IP and geochemical anomalies have been identified.

Drilling augments Mt Bonnie ahead of DFS

The Company recently completed drilling at Mt Bonnie and intersected mineralisation outside of the current resource. The encouraging results have extended the known mineralisation by ~35m below the current pit design in the south. This has the potential to increase the ~2.25 year mine life at Mt Bonnie, incorporating additional ore while lowering the overall strip ratio, which currently averages 8:1 (W:O), and therefore lowering costs.

Results include: **4m @ 6.1% Zn, 1.1g/t Au, 176g/t Ag, 1.3% Pb, 0.1% Cu** from 73m (incl. 2m @ 10.3% Zn, 1.9g/t Au, 304g/t Ag, 2.1% Pb, 0.2% Cu), **1m @ 7.7% Zn, 1.5g/t Au, 305g/t Ag, 1.9% Pb, 0.3% Cu** from 76m, and **7m @ 2.2g/t Au and 81g/t Ag** from 88m within a Au-Ag zone below the pit.

The 15 drill holes, which have intersected ore outside of the resource, form part of a larger 65 hole RC and 9 diamond hole program which provided geotech, hydro and metallurgical information for the DFS as well as grade control and exploration data. A resource update is expected in the JunQ CY18. The current resource for Mt Bonnie is 1.6Mt @ 3.8% Zn, 1.3g/t Au, 127g/t Ag, 1.1% Pb and 0.2% Cu with over 90% indicated. The total resource for Hayes Creek is 4.1Mt @ 4.4% Zn, 1.8g/t Au, 124g/t Ag, 0.9% Pb, 0.3% Cu. The DFS is expected in 2H18.

Initiate coverage with a Speculative Buy

PNX is development ready and looks undervalued at both consensus and spot prices. However, the scale is modest and hence it could trade at a discount to our valuation unless, or until, there is an upgrade in consensus medium term zinc prices or a new discovery that can be processed at the central Hayes Creek plant (which in addition to providing scale, would also lead to an increase in our base valuation).

The Company is well placed for exploration success (it has 1,700km² of leases) with numerous targets to test during the 2018 field season. Catalysts within the Company's control include resource growth and improvements in recoveries from the ongoing locked cycle floatation testwork. We initiate coverage of PNX Metals with a fully diluted NAV of 2cps and a 12-month price target of 2.2cps. We value PNX at 2.6cps at current spot prices.

16 Mar 2018

Share Price	\$0.012
Valuation	\$0.020
Price Target (12 month)	\$0.022

Brief Business Description:

Base and precious metals explorer & developer

Hartleys Brief Investment Conclusion

PNX is focused on the Hayes Creek polymetallic project in the NT. The recent PFS considers mining of the Mt Bonnie o/p and Iron Blow u/g mines. PNX aims to be a zinc producer with silver, gold, copper and lead credits.

Chairman & MD

Graham Ascough (Non-Exec Chairman)

James Fox (MD & CEO)

Top Shareholders

Marilei International Limited	14.4%
BNP Paribas Noms Pty Ltd	6.6%

Company Address

Level 1, 135 Fullarton Road
Rose Park, SA 5067

Issued Capital 1088.9m

- fully diluted 1182.7m

Market Cap A\$13m

- fully diluted A\$14m

Cash (16 Feb 2018a) A\$1.9m

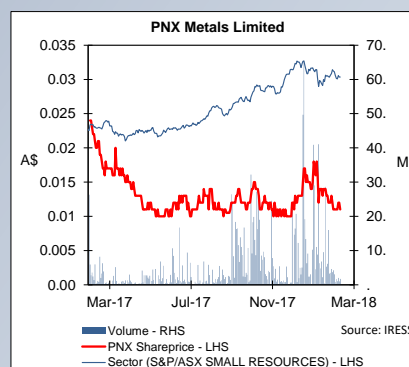
Debt (16 Feb 2018a) A\$0.0m

EV - current A\$11.2m

EV - fully diluted A\$8.7m

Prelim. (A\$m)	FY17a	FY18e	FY19e
Prod (Kt ZnEq)	-	-	-
Op Cash Flw	-0.9	0.1	2.2
Norm NPAT	-2.1	-0.3	0.4
CF/Share (cps)	-0.4	0.0	0.0
EPS (cps)	-0.4	0.0	0.0
P/E	-2.8	-33.0	52.8

	Mt	ZnEq (%)
Resources	4.1	10.9
Reserves	0.0	0.0



Paul Howard

Resources Analyst

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Hartleys has assisted in the completion of capital raisings in the past 12 months for PNX Metals Limited ("PNX"), for which it has earned gross fees of \$113,652.90. Hartleys has also provided corporate advice within the past 12 months and continues to provide corporate advice to PNX, for which it has earned gross fees of \$42,500 and continues to earn fees. Hartleys has a beneficial interest in 20 million unlisted options in PNX.

										16 March 2018	
Speculative Buy											
Directors						Company Information					
Graham Asdcorg (Non-Exec Chairman)						Level 1, 135 Fullarton Road					
James Fox (MD & CEO)						Rose Park, SA 5067					
Paul Dow d (Non-Exec Director)						+61 8 8364 3188					
David Hillier (Non-Exec Director)											
Peter Watson (Non-Exec Director)						www.pxmmetals.com.au					
Top Shareholders											
										m	%
Marlei International Limited										156.77	14.4%
BNP Paribas Noms Pty Ltd										71.56	6.6%
Sochrastem SA										63.15	5.8%
Polezna Gromadka Ltd										58.96	5.4%
Directors and Management										41.83	3.8%
Reserves & Resources											
Reserves		Mt	Zn (%)	Pb (%)	Cu (%)	Ag (g/t)	Au (g/t)	ZnEq (%)			
		-	-	-	-	-	-	-			
Resources		Mt	Zn (%)	Pb (%)	Cu (%)	Ag (g/t)	Au (g/t)	ZnEq (%)			
Mt Bonnie		1.5	3.8	1.1	0.2	127	1.3	9.5			
Iron Blow		2.5	4.7	0.8	0.3	122	2.1	11.8			
Measured		-	-	-	-	-	-	-			
Indicated		3.5	4.9	1.0	0.28	137	1.9	12.0			
Inferred		0.6	1.4	0.4	0.10	52	1.5	5.0			
Total		4.1	4.3	0.9	0.25	124	1.8	10.9			
Production Summary											
Unit		30 Jun 17	30 Jun 18	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22				
Mli Throughput		Mt	-	-	-	0.015	0.158	0.451			
Mned grade		Zn Eq (%)	-	-	-	6.3	8.6	9.8			
Combined Recovery & Payability		%	-	-	-	69.3%	69.3%	69.3%			
Zinc		kt	-	-	-	0.1	3.0	12.6			
Lead		kt	-	-	-	0.1	1.2	2.9			
Copper		kt	-	-	-	0.0	0.1	0.5			
Silver		koz	-	-	-	30.9	457.5	1,445.8			
Gold		koz	-	-	-	0.7	5.4	12.7			
Zinc Eq		kt	-	-	-	0.7	9.4	30.8			
Zinc Eq		mtb	-	-	-	1.5	20.7	67.8			
Modelled mine Life		yr	-	-	-	7.5	6.5	5.5			
Modelled mining inventory		Mt	-	-	-	5.5	4.9	4.2			
Costs											
Unit		30 Jun 17	30 Jun 18	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22				
Cost per milled tonne		\$A/t	-	-	-	281.8	172.7	143.4			
EBITDA / tonne milled ore		\$A/t	-	-	-	-115.2	42.1	96.7			
Total cash costs		\$A/lb Eq	-	-	-	2.91	1.32	0.95			
- ex royalties		\$A/lb Eq	-	-	-	2.78	1.20	0.85			
C1: Operating Cash Cost = (a)		\$A/lb Eq	-	-	-	2.05	1.15	0.83			
C2: (a) + Royalty = (b)		\$A/lb Eq	-	-	-	2.18	1.26	0.94			
C2: (a) + depreciation & amort. = (c)		\$A/lb Eq	-	-	-	5.50	1.55	0.96			
(a) + actual cash for dev. = (d)		\$A/lb Eq	-	-	-	38.36	1.44	0.95			
C3: (c) + Royalty		\$A/lb Eq	-	-	-	5.63	1.66	1.07			
(d) + Royalty		\$A/lb Eq	-	-	-	38.49	1.55	1.05			
Total cash costs as per P&L		\$A/lb Eq	-	-	-	2.91	1.32	0.95			
All in sustaining cash cost (AISC)		\$A/lb Eq	-	-	-	4.94	1.46	1.00			
Price Assumptions		Unit	30 Jun 17	30 Jun 18	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22			
AUDUSD		A\$/US\$	0.75	0.79	0.76	0.76	0.77	0.78			
Zinc		US\$/lb	1.25	1.49	1.35	1.22	1.19	1.17			
Lead		US\$/lb	1.03	1.12	1.03	1.00	0.99	0.99			
Copper		US\$/lb	2.71	3.00	3.00	3.00	3.10	3.10			
Silver		US\$/oz	17.66	18.29	18.98	17.46	17.46	17.46			
Gold		US\$/oz	1241.37	1320.00	1325.00	1275.00	1275.00	1275.00			
Hedging											
		30 Jun 17	30 Jun 18	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22				
Hedges maturing?		No	No	No	No	No	No	No			
Sensitivity Analysis											
		Valuation						FY22 NPAT			
Base Case		0.019						34.7			
Spot Prices		0.03 (33.1%)						40.6 (16.9%)			
Spot USD/AUD 0.78, Zinc \$1.47/lb, Lead \$1.10/lb, Copper \$3.12/lb, Silver \$16.54/oz.											
AUDUSD +/-10%											

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"tbc capital" could be equity or debt. Our valuation is risk-adjusted for how this may be obtained.
Sources: IRESS, Company Information, Hartleys Research

Last Updated: 16/03/2018

COMPANY OVERVIEW

PNX Metals Limited (PNX) is an ASX listed minerals exploration company, with aspirations of being a successful explorer, and sustainable and profitable gold and base metals producer. PNX has a significant base and precious metals tenement portfolio, primarily in the Northern Territory and is developing the Hayes Creek zinc-gold-silver project, 170km south-east of Darwin.

PNX is an ASX-listed base and precious metals explorer and developer

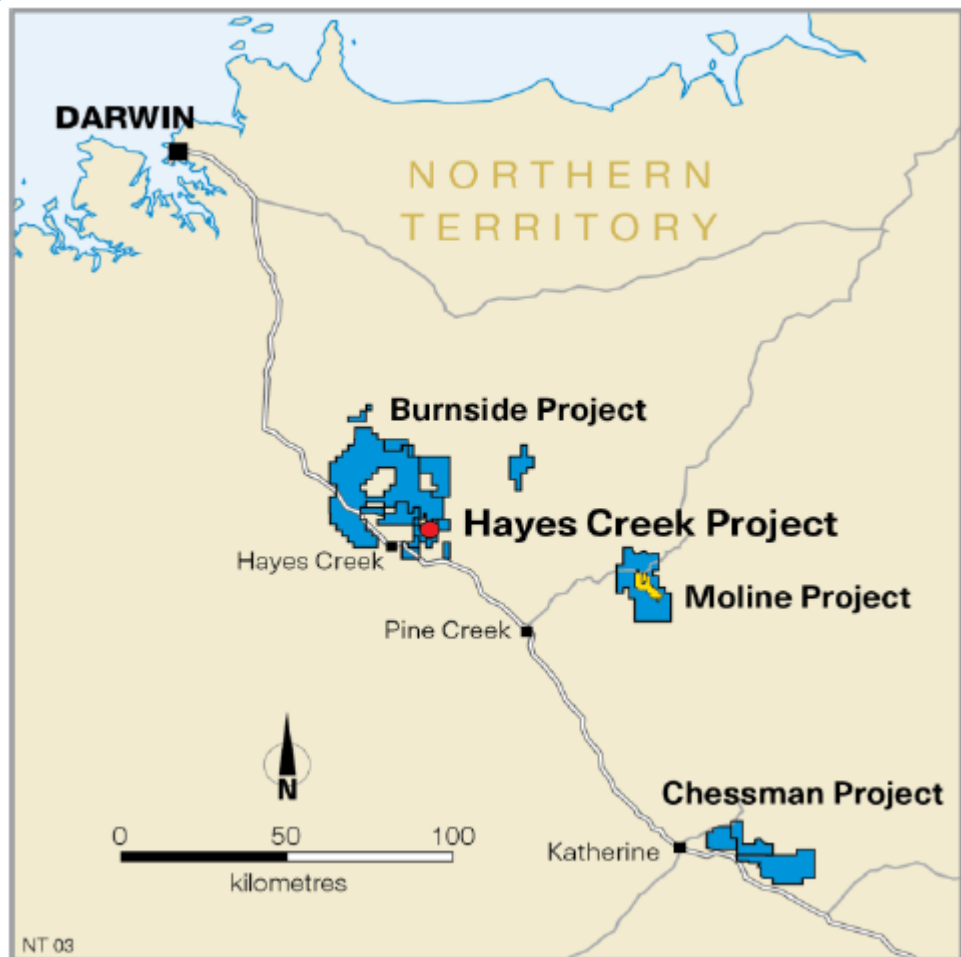
The Company's exploration strategy is focussed on exploring for new gold and base metal ore deposits that are complementary to Hayes Creek. A pipeline of greenfield and brownfield prospects are drill ready and have the potential to see PNX grow meaningfully its terms of market capitalisation following exploration success.

The Company was initially focussed on copper exploration in South Australia as Phoenix Copper Limited but a switch to the Northern Territory and a broader commodity focus in 2015 saw it adopt the name PNX Metals Limited.

Fig. 1: PNX Projects Locations

The Company is focussed on developing the Hayes Creek project and exploring the surround tenure

PNX is aiming to produce zinc-gold-silver from early mid CY18



Source: PNX Metals Ltd

THE HAYES CREEK PROJECT

Fig. 2: Hayes Creek Project Snap Shot

Hayes Creek

<i>Interest:</i>	100%
<i>Location:</i>	170km south of Darwin, NT
<i>Project stage:</i>	Development
<i>Mineral Resources:</i>	4.1Mt@ 4.3%Zn, 0.9%Pb, 0.25% Cu, 1.8g/t Au, 124g/t Ag
<i>Scale:</i>	~450ktpa
<i>Mine Life:</i>	~6.5 years
<i>Capex:</i>	~A\$67 – A\$73m
<i>C1 Cash Cost:</i>	~A\$0.83/lb ZnEq
<i>All In Sustaining Costs (AISC):</i>	~A\$1.05/lb ZnEq

Source: PNX Metals Ltd, Hartleys Estimates

Hayes Creek VMS mineralisation was first discovered in the late 1800s

Background

The Hayes Creek project comprises 18 granted mineral leases and contains the Mt Bonnie and Iron Blow base and precious metal deposits. The project is located approximately 170km south of Darwin, 6km east of the Stuart Highway.

The Mt Bonnie and Iron Blow deposits are considered to be volcanogenic massive sulphide deposits (VMS) and were first discovered in the late 1800s with limited open pit and underground mining occurring in the early 1900s. During the mid-1980s most of the oxidised ore was mined by shallow open pits for gold and silver, with the remaining primary sulphide ore now the focus for PNX.

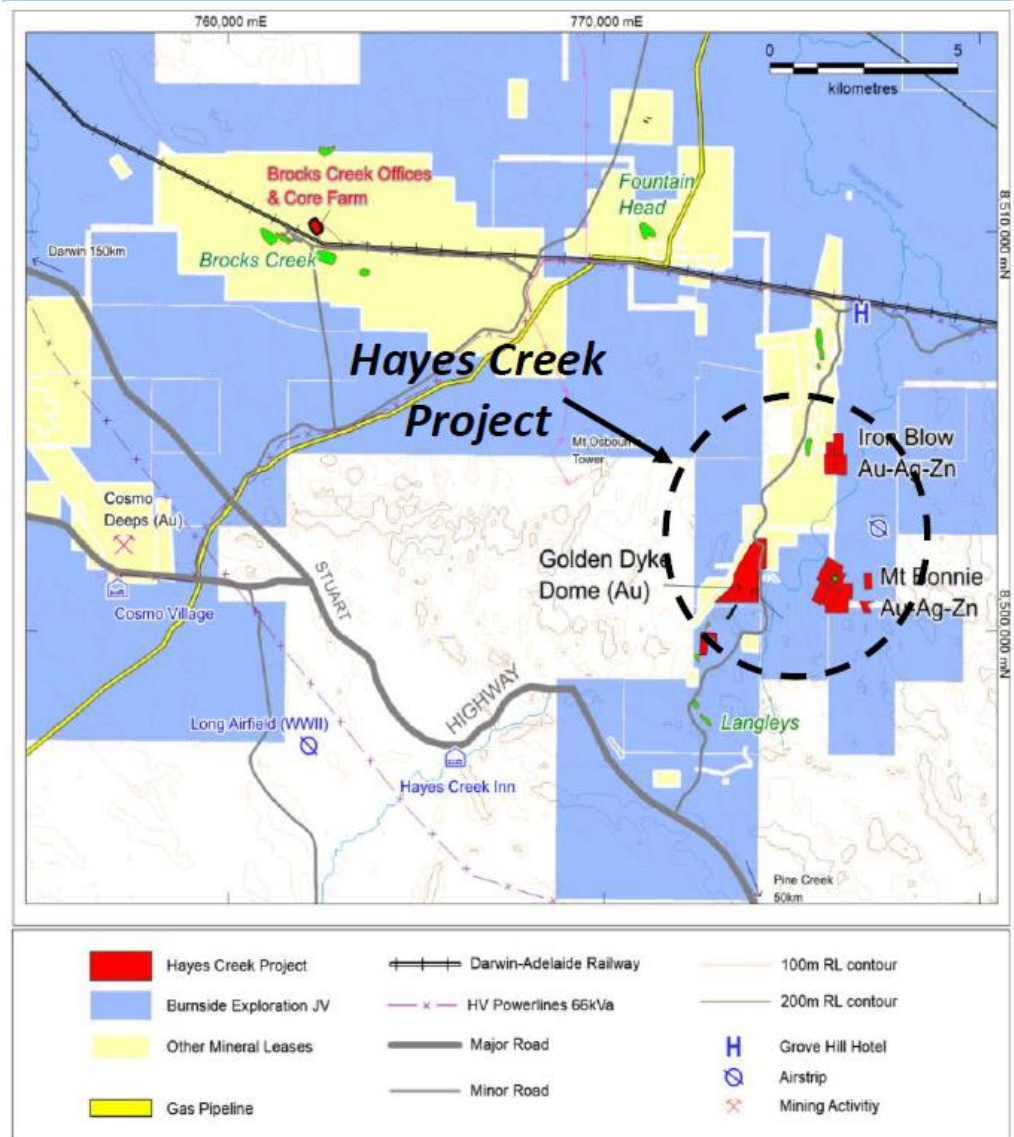
Fourteen of the Hayes Creek leases were acquired in August 2014 from Newmarket Gold NT Holdings Pty Ltd (Newmarket), previously Crocodile Gold Australia Pty Ltd; a subsidiary of Canadian-listed Kirkland Lake Gold Ltd (Kirkland Lake). Until January 2018, Newmarket held the right to clawback a 30% interest in the project but the option has now expired. Subsequently, PNX acquired an additional 4 leases from Newmarket over the Fountain Head prospect. This acquisition was key given Fountain Head is the preferred location for the Hayes Creek process plant due to the existing infrastructure and historic open pits, which can be used to store future tailings. In return for the Fountain Head acquisition, which included PNX taking 100% of the Moline project, the Company agreed to carve out three exploration areas within the Burnside project area. PNX will pay Newmarket a 2% NSR on gold and silver produced at Hayes Creek.

Hayes Creek has a total resource of 4.1Mt@ 4.3%Zn, 0.9%Pb, 0.25% Cu, 1.8g/t Au, 124g/t Ag

Within Hayes Creek, the Mt Bonnie and Iron Blow mineral leases (MLs) are underlain by exploration license (ELs) EL25748 to the east, EL23431 to the west and EL9608 to the southeast, all part of the broader Burnside project in which PNX holds a 51% interest and is earning a 90% interest from Newmarket. To the west of Iron Blow, mineral leases associated with alluvial gold operations are held by third parties.

All MLs are situated within Perpetual Pastoral Lease 1217, NT Portion 07122 known as Douglas Station. There are no pastoral activities in the area. A current land access agreement relating to exploration and resource drilling activities is in place with Douglas Station; however, an access agreement for mining activities is required.

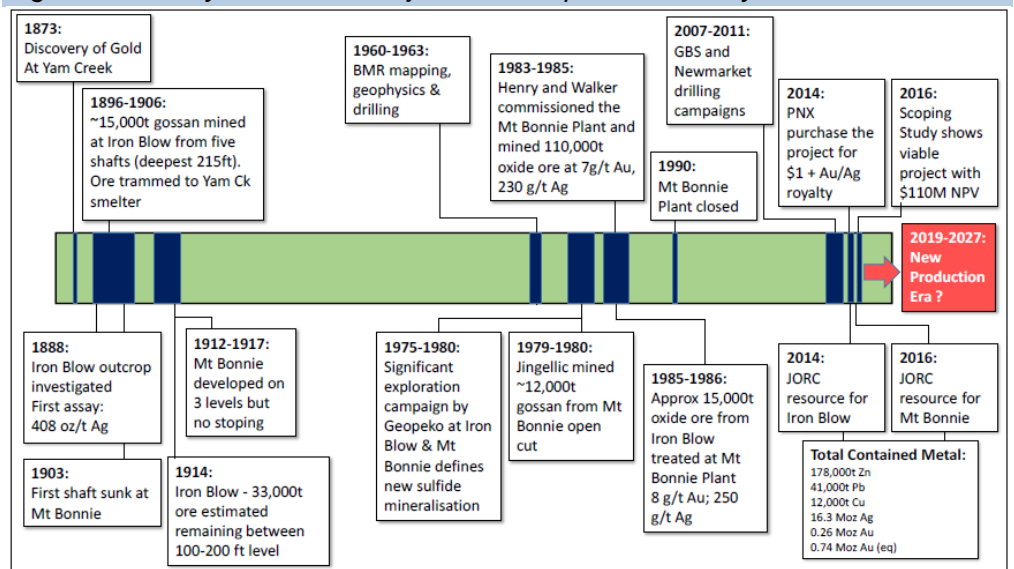
Fig. 3: The Hayes Creek Project



Hayes Creek is serviced by excellent infrastructure

Source: PNX Metals Ltd

Fig. 4: Hayes Creek Project development history



Minerals have been exploited in the region for almost 150 years

Source: PNX Metals Ltd

Monsoonal rain patterns render PNX with a 7 month field season

The project is well service by rail, power and gas. The Adelaide-Darwin railway runs through the project area, as does 66kVa and 11 kVa powerlines and a gas pipeline

The project is situated within the Pine Creek Orogen, an intracratonic basin lying on Archaean basement containing a thick sequence of Proterozoic sediments deposited from 2.2 Ga to 1.87 Ga.

Location, Infrastructure & Geology

The Hayes Creek project is located in the tropical zone with monsoonal rain patterns defining two distinctive seasons, wet and dry. Generally the wet season commences in November and continues until March, with the highest rainfall months in January and February. June and July has the lowest mean monthly rainfall.

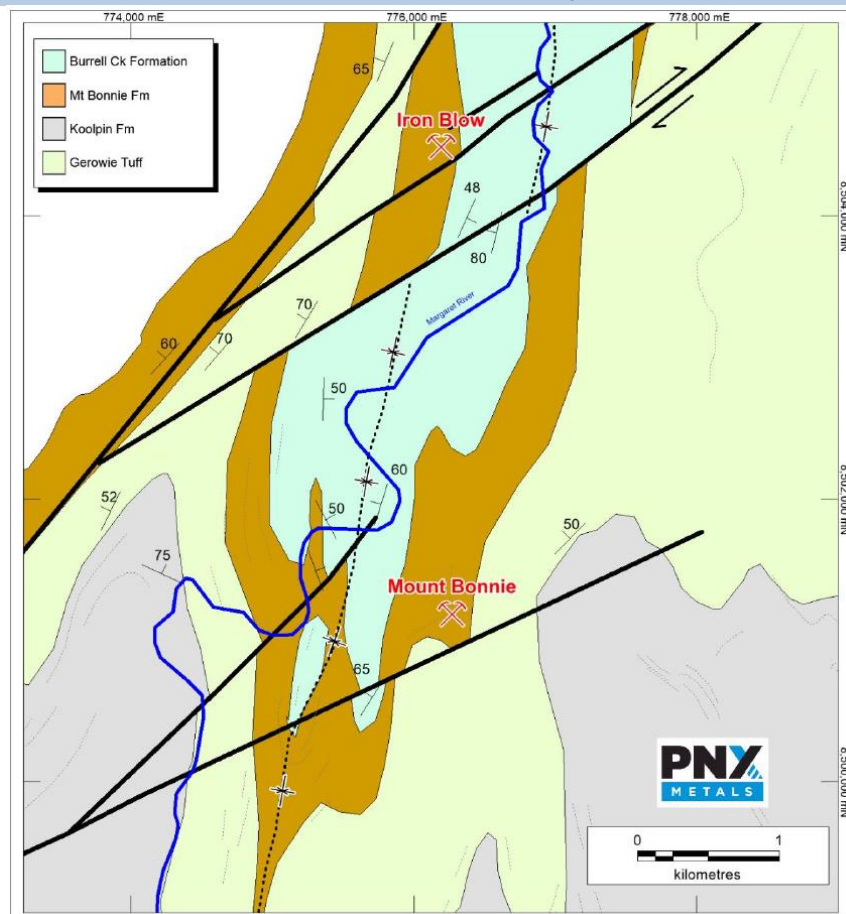
The project is well service by road, power and gas. The Stuart Highway runs through the project area, as does 66kVa and 11 kVa powerlines and a gas pipeline.

The topography of the project area exhibits generally north-south trending ridge lines up to 200m high with steep slopes and sharp crests dissected by numerous small immature creeks. Small narrow alluvial flats are associated with local changes in grade. The Mt Bonnie deposit is associated with a north-south trending ridge line. The ridge lines merge into foothills and undulating alluvial soil plains sourced from the erosion of the ridge lines.

The project lies within the headwaters of Margaret River which flows northwards into the Adelaide River. The creeks and drainage lines are perennial, flowing in wet season and consequently are dry during the dry season.

The Hayes Creek project is situated within the Pine Creek Orogen, which has been interpreted as an intracratonic basin lying on Archaean basement containing a 14 km thick sequence of deformed Proterozoic sediments deposited from 2.2 Ga to 1.87 Ga. Palaeoproterozoic strata of the Pine Creek Orogen are extensively mineralised, hosting over 1,000 mineral occurrences.

Fig. 5: Hayes Creek Project Local Geology



Source: PNX Metals Ltd

The Mt Bonnie and Iron Blow deposits occupy approximately the same stratigraphic location near the bottom of the Mt Bonnie Formation, close to the contact with the underlying Gerowie Tuff. The Mt Bonnie Formation comprises a succession of interbedded slate, mudstone, phyllite, siltstone, feldspathic greywacke and minor tuffaceous chert, vitric crystal tuff, lithic crystal tuff, and rare banded ironstone and dolostone. It represents a transition from the low energy, shallow water environments of the Koolpin Formation and Gerowie Tuff to high energy, turbiditic environment of the overlying Finnis River Group.

Mt Bonnie and Iron Blow are thought to be VMS deposits formed at or near the sea floor by submarine felsic volcanic activity.

Both Mt Bonnie and Iron Blow are mineralogically similar deposits, thought to be volcanogenic massive sulphide (VMS) deposits formed at or near the sea floor by submarine felsic volcanic activity. The fumaroles circulated metal-rich hydrothermal fluids into the local sediments. These units were then deformed at approximately 1875Ma during an event which produced open upright folds in the sedimentary sequence. The folds strike approximately north-south and plunge to the north. The deposits were rotated down towards the north-south trending axis and each deposit now occurs on opposite limbs of the Margaret Syncline and lie more or less on their sides. Both deposits have been partly dismembered by east-west trending cross faults and sheared by thrust faults operating approximately along the bedding planes. The Mt Bonnie deposit has been tilted to the west and forms a body dipping relatively consistently to the west at approximately 45°. The Iron Blow deposit has been tilted steeply to the east at approximately 75°. Both deposits are considerably dismembered by east-west, northeast and northwest trending faults.

The mineralogy of the massive sulphides in the primary zone of each deposit is dominated by pyrrhotite and sphalerite, with subordinate pyrite, galena, chalcopyrite, arsenopyrite, marcasite and tetrahedrite. Pyrrhotite constitutes up to 80% of the rock. Sphalerite constitutes between 5-10% of the rock, and chalcopyrite occurs as ex-solution inclusions within the sphalerite. Galena usually forms less than 5% of the rock. Sulphide minerals range in grain size from 0.5 mm to 5 mm and are massively textured. Mineral associations and textures are consistent with hydrothermal ore formation at temperatures between 350-450°C. The gangue minerals are dominated by dolomite, chlorite, talc, actinolite and quartz.

The mineralogy of the massive sulphides in the primary zone of each deposit is dominated by pyrrhotite and sphalerite, with subordinate pyrite, galena, chalcopyrite, arsenopyrite, marcasite and tetrahedrite.

Both the Iron Blow and Mt Bonnie deposits were discovered during the 1870s as part of the 1872–73 gold rush. Between 1896 and 1906 approximately 13,700t of oxide and sulphide ore was extracted via open cut mining at Iron Blow. Mining of oxide mineralisation recommenced between 1983-86 via open cut mining with the extraction of approximately 110,000 tonnes of gold rich ore from Mt Bonnie and approximately 15,000 tonnes from Iron Blow.

Hayes Creek Preliminary Feasibility Study

PNX completed a Scoping Study for the Hayes Creek project and proceeded to undertake a Preliminary Feasibility Study (PFS), which was published in July 2017. The PFS uses a mining inventory of 3Mt @ 11.9% ZnEq (4.5% Zn, 1% Pb, 0.25% Cu, 131g/t Ag & 1.8g/t Au) to produce 119kt Zn, 9.3Moz Ag, 95koz Au and 21kt Cu/Pb in recoverable metal concentrates over the life of mine (LOM).

The PFS indicates ~12 months of waste stripping and ramp up prior to mining 1Mt of ore at the Mt Bonnie open pit over 2.25 years, before moving to the Iron Blow underground to produce ~2Mt over 4.5 years. While PNX refers to a 6.5 year mine line, total operational mine life will be 7.5 years, including stripping, at an annual average processing rate of 450kt. PNX expects to produce an average of 18.3kt Zn, 17.7kozAu and 1.4Moz Ag (39.1kt ZnEq) annually in concentrates from the Hayes Creek project. A small amount of lead/copper concentrate (3.3ktpa) will also be

produced as a by-product. PNX aims to complete a Hayes Creek DFS in 2H18, commence construction during 2019 and begin production in 2020.

The PFS estimates pre-production capex of A\$58.3M for plant and infrastructure. Coupled with mobilisation/demobilisation costs of A\$1.2M at Mt Bonnie and A\$7.5M of pre-production capital at Iron Blow, total pre-production capital will be in the order of A\$67M. The PFS includes A\$26M of underground sustaining capital as a mining cost. No sustaining capital has been modelled in the PFS for the Mt Bonnie open pit.

The PFS lacks provision of growth capital to fund ongoing exploration. We model A\$19M; A\$0.5M for the remainder of FY18 and then A\$0.5M per quarter from FY19 until the end of FY27 (current planned mine closure).

The 450ktpa plant will be located at the historic Fountain Head site, ~20km north of the mining area. PNX plans to use the existing Fountain Head pit as a tailings storage facility. However, recent work has identified the potential for additional gold mineralisation beneath the pit, so more work is required. A simple process flowsheet of crushing, milling, floatation (including regrind) and tails is expected, and will produce two products; a zinc concentrate and precious metals concentrate.

The PFS forecasts a net smelter revenue of \$628M after ~\$110M of haulages and shipping costs, and a pre-tax net cashflow of \$266M over the LOM after ~\$315M of operational costs, ~\$35M of royalties and underground capital of ~\$6.5m in year 2. PNX expects a 15 month payback and an IRR of 73%.

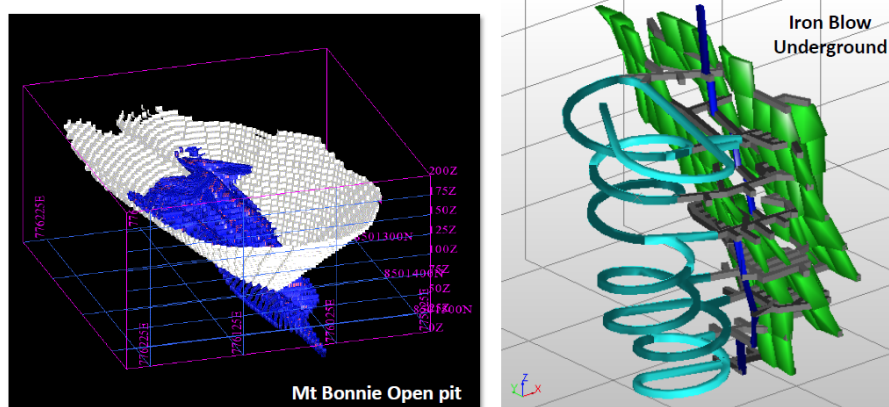
PNX assumes LOM commodity prices of US\$2,570 Zn, US\$1,289 Au, US\$19.40 Ag, US\$2,129 Pb and US\$6,366 Cu and an AUD:USD exchange rate of US\$0.73. Hartleys' lower consensus pricing is tabulated below.

Fig. 6: Expected LOM Commodity prices and Spot prices

		PNX PFS July 2017		Hartleys Estimates		Spot prices	
Average LOM commodity price		A\$	US\$	A\$	US\$	A\$	US\$
Zinc	\$/t	3,521	2,570	3,095	2,407	4,151	3,233
	S/lb	1.60	1.17	1.40	1.09	1.88	1.47
Gold	A\$/oz	1,766	1,289	1,589	1,237	1,690	1,317
Silver	A\$/oz	26.58	19.40	22.44	17.46	21.23	16.54
Copper	\$/t	8,721	6,366	8,566	6,665	8,841	6,888
	S/lb	3.96	2.89	3.89	3.02	4.01	3.12
Lead	\$/t	2,916	2,129	2,611	2,031	3,099	2,414
	S/lb	1.32	0.97	1.18	0.92	1.41	1.10

Source: PNX Metals Ltd, Hartleys Estimates, IRESS

Fig. 7: Hayes Creek deposits and mine design



Source: PNX Metals Ltd

The July 2017 PFS uses a mining inventory of 3Mt @ 11.9% ZnEq to produce 119kt Zn, 9.3Moz Ag and 95koz Au over the 6.5 year LOM.

Total pre-production capital will be in the order of A\$67M.

The PFS assumes LOM commodity prices in excess of Hartleys' consensus pricing.

Fig. 8: PNX PFS compared with Hartleys estimated parameters

Assumptions	Units	PNX PFS July 2017	Hartleys Estimates	% Difference	Hartleys Estimates at Spot Prices	Estimates at PNX Forecast Commodity	Comments
Assumed mine inventory	kt	2,973	2,974	0%	2,974	2,974	
Mt Bonnie o/p	kt	1,015	1,015	0%	1,015	1,015	
Iron Blow u/g	kt	1,958	1,958	0%	1,958	1,958	
Avg LOM Strip ratio	w/o	8	8	0%	8	8	
Avg LOM Zinc grade	%	4.45%	4.4%	0%	4.4%	4.4%	
Avg LOM Gold grade	g/t	1.77	1.8	0%	1.8	1.8	
Avg LOM Silver grade	g/t	130.6	131	0%	131	131	
Avg LOM Copper grade	%	0.25%	0.3%	0%	0.3%	0.3%	
Avg LOM Lead grade	%	0.97%	1.0%	0%	1.0%	1.0%	
Mine Life	yrs	7.5	7.5	0%	7.5	7.5	
Average annual ore processed	ktpa	396	397	0%	397	397	
Recoveries							
Zinc	%	89.9%	90%	0.1%	90%	90%	
Gold	%	56.6%	56%	-1.1%	56%	56%	
Silver	%	74.4%	74%	-0.5%	74%	74%	
Lead/ Copper	%	58.8%	58%	-1.4%	58%	58%	
LOM Recoverable metals to Concentrate							
Zinc	kt	118.9	119.0	0.1%	119.0	119.0	
Gold	koz	95.4	94.4	-1.0%	94.4	94.4	
Silver	koz	9,278.4	9,234.5	-0.5%	9,234.5	9,234.5	
Lead/ Copper	kt	21.4	21.1	-1.5%	21.1	21.1	
Payabilities							
Zinc	%	77.6%	77%	-0.8%	77%	77%	
Gold	%	84.1%	84%	-0.1%	84%	84%	
Silver	%	86.4%	86%	-0.4%	86%	86%	
Lead/ Copper	%	79.9%	80%	0.1%	80%	80%	
LOM Payable metals to Concentrate							
Zinc	kt	92.3	91.6	-0.8%	91.6	91.6	
Gold	koz	80.2	79.3	-1.2%	79.3	79.3	
Silver	koz	8,014.0	7,941.7	-0.9%	7,941.7	7,941.7	
Lead/ Copper	kt	17.1	16.8	-1.5%	16.8	16.8	
Average LOM commodity price							
Zinc	A\$/t	3,521	3,095	-12.1%	4,151	3,299	
Gold	A\$/oz	1,766	1,589	-10.0%	1,690	1,655	
Silver	A\$/oz	27	22	-15.6%	21	25	
Copper	A\$/t	8,721	8,566	-1.8%	8,841	8,172	
Lead	A\$/t	2,916	2,611	-10.5%	3,099	2,733	
Total Revenue	A\$M	750.1	645.6	-13.9%	754.8	696.0	
Zinc	A\$M	325.0	277.5	-14.6%	380.2	302.2	
Gold	A\$M	141.7	125.6	-11.4%	134.1	131.2	
Silver	A\$M	213.0	178.0	-16.4%	168.6	197.8	
Lead/ Copper	A\$M	70.5	64.6	-8.4%	72.0	64.8	
Total Operating Costs	A\$M	422.94	373.42	-11.7%	373.42	373.42	
Mining - o/p ore	A\$/t	6.15	6.15	0.0%	6.15	6.15	
Mining - o/p waste	A\$/t	4.19	4.19	0.0%	4.19	4.19	
Mining - underground	A\$/t	72.72	47.50	-34.7%	47.50	47.50	PNX's u/g mining cost includes sus. cap.
Processing	A\$/t	39.75	40.00	0.6%	40.00	40.00	
Haulage	A\$/t	36.56	36.99	1.2%	36.99	36.99	
G&A	A\$/t	4.49	4.50	0.2%	4.50	4.50	
Royalties	A\$M	35.30	42.30	19.8%	48.33	45.73	
Zinc/Copper/Lead	%	5.0%	5.0%	0.0%	5.0%	5.0%	
Gold/Silver	%	7.48%	7.48%	0.0%	7.48%	7.48%	
Total Project capital	A\$M	67.0	103.0	54%	103.0	103.0	
Plant and infrastructure capital	A\$M	58.3	65.0	12%	65.0	65.0	
Mt Bonnie Capital	A\$M	1.2	1.2	0%	1.2	1.2	
Mt Bonnie sustaining capital	A\$M	0.0	3.3		3.3	3.3	No o/p sustaining capital assumed in PFS
Iron Blow capital	A\$M	7.5	7.5	0%	7.5	7.5	
Iron Blow sustaining capital	A\$M	0.0	26.0		26.0	26.0	PNX assumes sus. cap. in u/g mining cost
Exploration	A\$M	0.0	19.0		19.0	19.0	No ongoing exploration assumed in PFS
Pre-tax Free Cash Flow (incl capital & expl)	A\$M	224.9	107.9	-52%	211.1	154.9	

Source: PNX Metals Ltd, Hartleys Estimates

THE BURNSIDE PROJECT

The Burnside exploration project is located along the Stuart Highway and surrounds the Hayes Creek project. Burnside is subject to a farm-in agreement between PNX and Newmarket, in which PNX holds 51% having spent in excess of \$2M, and can earn up to 90% by spending an additional \$2M by December 2018. PNX has spent \$1.6M on this Stage 2 earn-in and will likely meet the \$2M requirement. A sum \$0.5M is payable to Newmarket upon completion of a DFS.

As part of a recent deal, which saw PNX acquire the Fountain Head leases (now within the Hayes Creek project), PNX agreed to carve up three explorations areas within Burnside in exchange for Fountain Head and 100% ownership of the Moline project. There are numerous mineral deposits and mineral occurrences within the broader area including Cosmo-Howley, Woolwonga, Brocks Creek group, and Goodall, with

Hartleys has modelled Hayes Creek as per the inputs in the PFS but has used different commodity price assumptions and more conservative capital costs

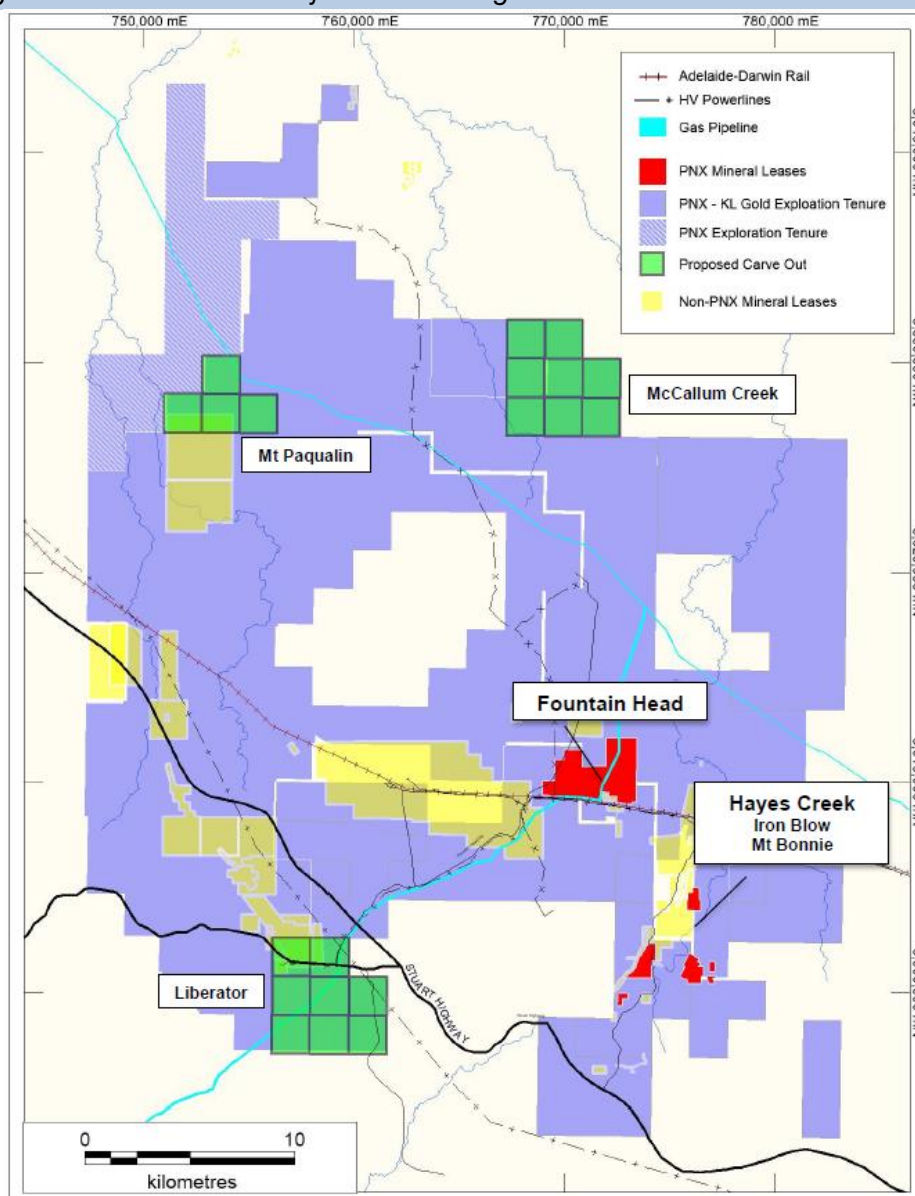
around 2Moz gold produced historically. The majority of existing gold resources are on ground not held by PNX; nonetheless, PNX's ground surrounding these deposits remains prospective.

Historically, 9Moz Au of resources have been defined in the wider region. Sulphide-hosted gold and base metal mineralisation was left behind as miners focussed on the oxide ore. As with Hayes Creek, PNX aims to exploit these sulphide ores where historic exploration was limited to near-mine and near surface/outcropping areas. Burnside has seen little base metals focus since the 1970s yet VTEM, soil geochemistry and historic data point to multiple large zinc targets with numerous mineralised drill intersections not followed up.

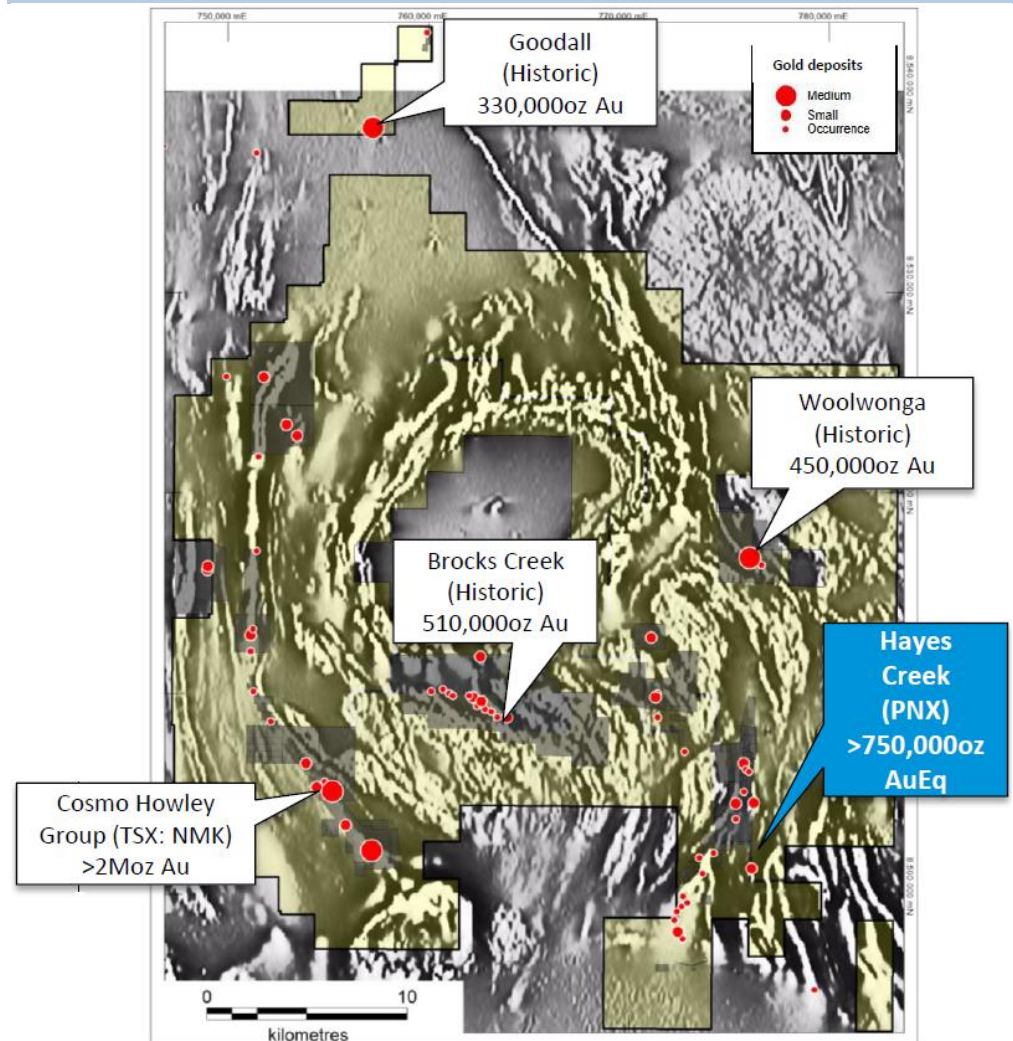
PNX has recently undertaken a HeliTEM survey, targeting prospective Mt Bonnie formation under shallow cover as well as ground IP to define drill targets. It has a number of targets requiring follow up, including the 1km long Margaret Pb-An-Au anomaly, which has never been drilled; the 1.6km long Zn-Pb anomaly at Deloraine and the 1km long Cu anomaly along strike from the historic Mt Ellison copper mine where 3.3kt @ 20% Cu was mined in the 1800s, just 20km north of Hayes Creek.

PNX has a number of prospective targets on its Burnside project including the 1km long Margaret Pb-An-Au anomaly, the 1.6km long Zn-Pb anomaly at Deloraine and the 1km long Cu anomaly along strike from the historic Mt Ellison copper mine.

Fig. 9: Burnside Project Farm-in ground



Source: PNX Metals Ltd

Fig. 10: Burnside Project and historic gold endowment

Source: PNX Metals Ltd

THE MOLINE PROJECT

The Moline project, which lies on granted mineral leases approximately 65km to the east of the Hayes Creek project, comprises five key gold-zinc prospects: Moline, School, Tumbling Dice, Swan, and Hercules. The Evelyn base metal deposit also occurs within the tenure. Through the recent agreement with Newmarket, which saw the Fountain Head leases essentially swapped for 20 graticular blocks within the Burnside project, PNX also acquired 100% of the Moline project. Importantly, mining activities at Moline were curtailed suddenly in 1992 after a tank failure in the processing plant, leaving unmined mineralisation at the bottom of some pits. A host of untested gold and base metal targets also occurs on the surrounding exploration licence.

Recent geochem work by PNX at Moline uncovered three broad Zn-Pb anomalies at Waterhole, Mango and Swan. First pass drilling at Swan in late 2017 returned a drill intercept of 1m @ 4.7% Zn, 11.4g/t Au, 96g/t Ag and 0.9% Pb, just south of a 700m long Zn-Pb surface anomaly. The Waterhole prospect is defined by a large 1,300m x 400m soil anomaly with peak values of 1,558ppm Zn, while the Mango prospect is an 800m x 100m soil anomaly with associated hematite altered sediments.

A subsequent IP survey identified zinc and gold targets at the Swan Prospect. The near surface Zn-Pb target is located 250m the 1m @ 4.7% Zn, 11.4g/t Au, 96g/t Ag and 0.9% Pb from 45m drill result, and coincides with a strong surface geochem

There are numerous mineral deposits and mineral occurrences within the area including Cosmo-Howley, Woolwonga, Brocks Creek group, and Goodall, with around 2Moz gold produced historically.

Recent geochem work by PNX at Moline uncovered three broad Zn-Pb anomalies at Waterhole, Mango and Swan.

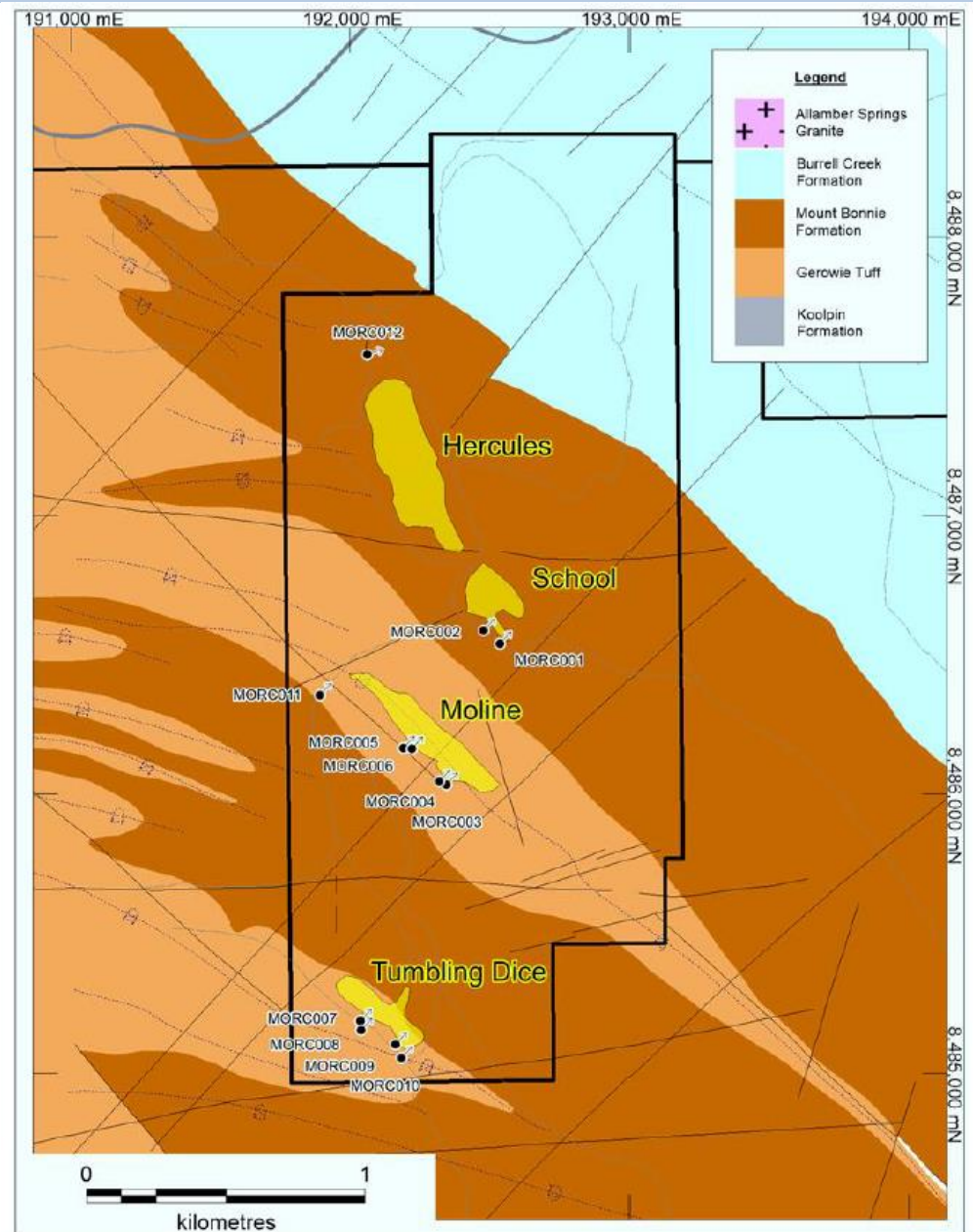
Drilling at Swan in late 2017 returned a drill intercept of 1m @ 4.7% Zn, 11.4g/t Au, 96g/t Ag and 0.9% Pb, just south of a 700m long Zn-Pb surface anomaly.

A recent IP survey identified zinc and gold targets at the Swan Prospect. The near surface Zn-Pb target is located 250m the 1m @ 4.7% Zn, drill result, and coincides with a strong surface geochem anomaly.

A deeper target has also been identified and has potential to be a gold sulphide target given the presence of an Au-As anomaly up dip from the target at surface.

anomaly. The Zn-Pb target occurs as a bulls-eye magnetic high interpreted to be associated with a fold hinge. A deeper (75-100m) target has also been identified and has potential to be a gold sulphide target given the presence of an Au-As anomaly up dip from the target at surface. RC drilling was planned to commence in early December 2017 to target these anomalies, with additional IP to be completed at the nearby Waterhole and Mango prospects, but these works have been postponed until after the NT wet season. We anticipate on the ground works commence early in the JunQ 2018.

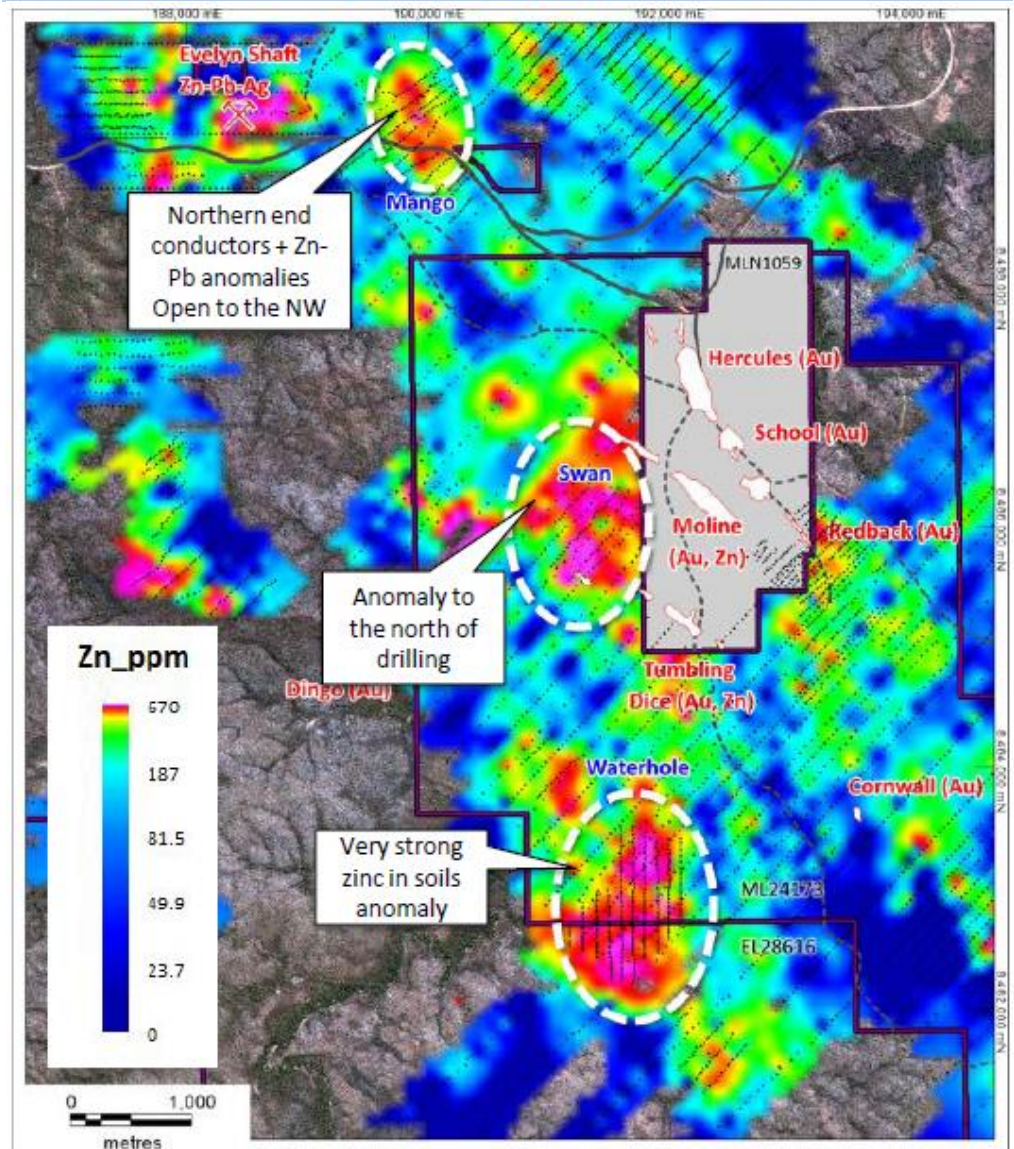
Fig. 11: Moline Project geology and prospects



Source: PNX Metals Ltd

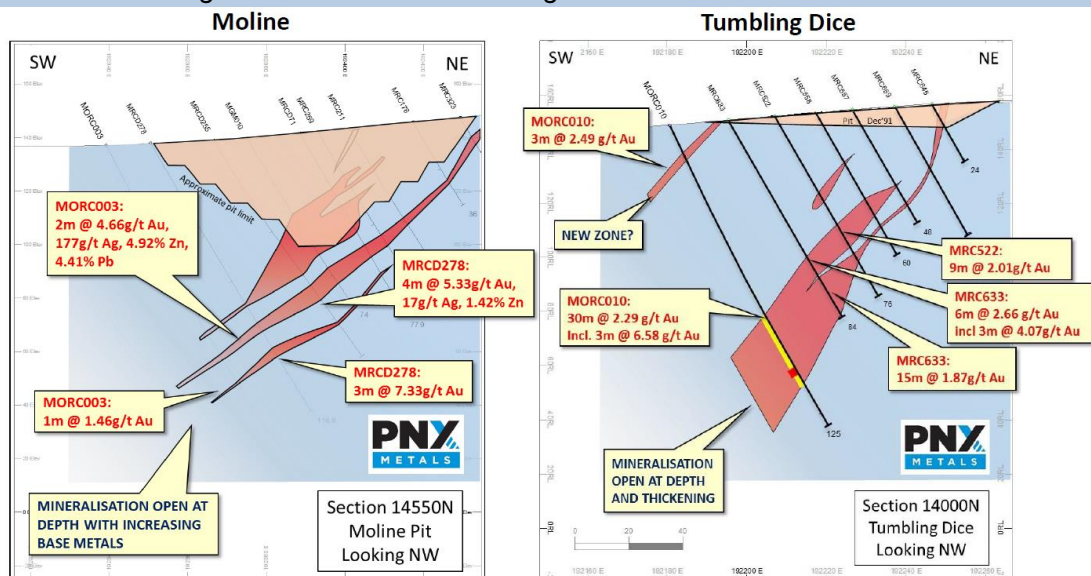
Fig. 12: Moline Project Zn geochemistry anomalism

Moline has an abundance of Zn geochemical anomalies which will be further tested in 2018.



Source: PNX Metals Ltd

Fig. 13: Previous drilling at Moline and Tumbling Dice



Source: PNX Metals Ltd

Fig. 14: Pipeline of targets at Burnside and Moline

Area	Prospect	Target			Supporting Evidence				
		Style	Commodity	From Hayes Creek	Rock Chips	Geochem	Anomaly Size	Geophysics	Drilling
Burnside	Margaret	VMS	Zn-Ag-Pb-Au	1 km	No outcrop	0.1g/t Au + 100ppm Pb	1.2km	SkyTEM target EM signature	EM modelling
	Lady J West	Epithermal Vein	Zn-Ag-Pb-Au	4 km	2.52 g/t Au, 3% Pb	50ppm Pb	0.2km	IP target	Target area untested
	Yellow Track	Epithermal Vein	Zn-Ag-Pb-Au	7 km	1.5 % Zn	250ppm Zn	1.4km	Late-time VTEM BLT139	Small area tested >1% Zn
	Target 18	VMS	Zn-Ag-Pb-Au	7 km	0.24 g/t Au, 0.2% Zn	100ppm Zn	0.3km	SkyTEM target	Nil
	Mt Ellison	Epithermal Vein	Cu-Bi	19 km	7.9% Cu	500ppm Cu	1km	Late-time VTEM BLT089	Nil
	Deloraine	Epithermal Vein	Zn-Ag-Pb-Au	19 km	0.6% Pb	250ppm Zn	1.8km	Late time VTEM BLT052/57	Nil
Moline	Mango	Epithermal Vein	Zn-Ag-Pb-Au	64 km	2 g/t Au, 0.8% Cu, 0.3% Pb	500ppm Zn	0.8km	Oblique to magnetic late-time VTEM MOLT050	Ground IP target High Priority drill late 2017
	El Dollarado	Epithermal Vein	Zn-Ag-Pb-Au	66 km	25% Zn, 20% Pb	250ppm Zn	0.8km	Late-time VTEM MOLT005	Nil
	Moline	Epithermal Vein	Au-Zn	67 km	Numerous	Along strike from historic mine	Along strike from historic mine	Various magnetic and VTEM responses	Numerous holes mostly gold analysis

Source: PNX Metals Ltd

PNX also holds ground further south at Chessman and in South Australia, but is currently focussed on Hayes Creek, Burnside and Moline.

THE CHESSMAN PROJECT

The Chessman project is located approximately 20km due east of Katherine, NT at the southern margin of the Pine Creek Orogen. Easy access is via the Stuart Highway and then along roads that were established in 2000 for ore haulage to and from the Maud Creek mining area. The Chessman project surrounds the ~1Moz Maud Creek gold deposit which is being contemplated for development by Kirkland Lake. There are no apparent plans for PNX to undertake on ground works at the Chessman project in the near future. Chessman is subject to the same earn-in agreement as Burnside.

SOUTH AUSTRALIAN PROJECTS

PNX holds ground in South Australia. However, no on-ground exploration activities were undertaken during 2017 at the Company's four Yorke Peninsula and eight Burra region exploration licences. In late 2017, PNX granted an option to Ausmex Mining Group Limited (Ausmex) which if exercised will result in the commencement of a farm-in and joint venture agreement whereby Ausmex can earn up to 90% over two stages (60% and 90%) in PNX's exploration licences in and around the Burra area of South Australia. Each stage requires Ausmex to spend a minimum of \$300,000 on diamond drilling or other agreed exploration activities. Ausmex has until July 2018 at the latest to exercise the option.

RESOURCES AND RESERVES

PNX has published JORC 2012 resources for Mt Bonnie and Iron Blow, totalling 4.1Mt @ 10.9% ZnEq. Recent resource extension drilling has extended the known mineralisation by ~35m below the current pit design in the south of Mt Bonnie. This has the potential to increase the mine life at Mt Bonnie, incorporating additional ore while lowering the overall strip ratio, which currently averages 8:1 (W:O), and therefore lowering costs.

PNX has not yet estimated a reserve for the Hayes Creek project but uses a mining inventory in the PFS, which assumes a 73% resource to reserve conversion. A reserve

will be included in the DFS later this year. The current mine inventory used in the PFS and our model is 2.97Mt @ 4.5% Zn, 1% Pb, 0.25% Cu, 131g/t Ag & 1.8g/t Au.

Fig. 15: Hayes Creek Resource Estimate

	Mt	Zn%	Pb%	Cu %	Ag (g/t)	Au (g/t)	Zn Eq %
TOTAL	4.1	4.3	0.9	0.2	124	1.8	10.9
Measured	-	-	-	-	-	-	-
Indicated	3.5	4.9	1.0	0.3	137	1.9	12.0
Inferred	0.6	1.4	0.4	0.1	52	1.5	5.0
Mt Bonnie	1.5	3.8	1.1	0.2	127	1.3	9.5
Iron Blow	2.5	4.7	0.8	0.3	122	2.1	11.8

Source: PNX Metals Limited

Hayes Creek has a total resource of 4.1Mt@ 4.3%Zn, 0.9%Pb, 0.25% Cu, 1.8g/t Au, 124g/t Ag

PNX is solely focussed on development within the NT; a pro-mining jurisdiction.

KEY SUPPLIERS & CUSTOMERS

GR Engineering Group has been appointed as Study Manager for PNX's Hayes Creek DFS. PNX has also engaged CSA Global Pty Ltd for the resource estimates and mining studies on both Mt Bonnie and Iron Blow in the past, BHM Process Consultants Pty Ltd, Nagrom and Mworx Pty Ltd for metallurgical and processing consultation, and Primero Group for process plant and infrastructure design, and overall PFS compilation. TriLab Pty Ltd and Land & Marine Geological Services Pty Ltd has aided in tailings design in the PFS.

PNX also commissioned Cliveden, a specialist trader, consultant and concentrate marketing agent to review, analyse and assess the marketability of the zinc and precious metals concentrates proposed in its PFS. Recommendations were made regarding the potential market for PNX concentrates, indicative pricing, effects of impurities, standard TC/TCs, and concentrate handling, transport and shipping options. PNX has indicated that its zinc concentrates and precious metals concentrates are likely to be in demand and readily saleable as high-value products.

GEOGRAPHIC EXPOSURE

PNX is solely focussed on development within the NT; a pro-mining jurisdiction. We envisage a concentrate being trucked along the Stuart Highway from Hayes Creek to Darwin port for export. While the Adelaide-Darwin railway runs through the project area, we do not foresee this presenting a challenge in the sense of requirement to cross the line as it is positioned north of the planned mining area.

INDUSTRY EXPOSURE

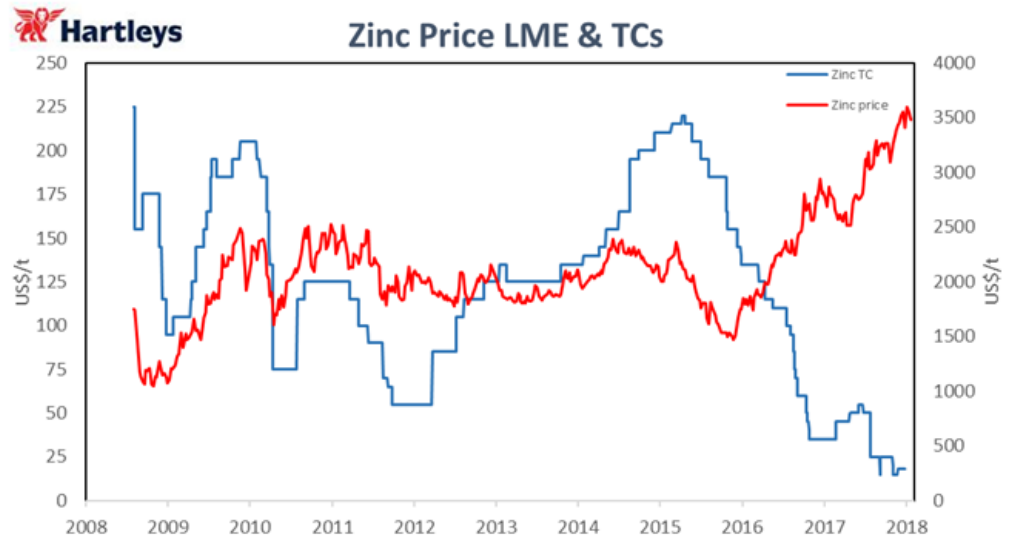
We expect ~43% of PNX's revenue to be generated from the sale of zinc concentrate, with silver (28%), gold (19%) and lead/copper (10%) making up the remainder. PNX is therefore exposed to both the base metals and precious metals markets but is most sensitive to changes in the zinc price outlook.

In the past 18 months, zinc (and lead) has outperformed as mine closures (reserve depletion/strategically driven, environmental restrictions in China) have led to concentrate shortages and tightening metal supplies, pointing to a structural dislocation. Since 2015, we have seen over 1Mt of zinc concentrate supply drop off with the closure of mines like Century (395ktpa) as well as smaller operations such as the Lisheen mine in Ireland (105ktpa) and Mae Sod in Thailand (~40ktpa). We have also seen treatment costs (TCs) fall and by-product credits increase as refineries attempt to entice producers. It is estimated that over 2Mtpa of new mine capacity is required by 2020 and global demand is forecast to grow by 370ktpa to 2022.

In the past 18 months, zinc has outperformed as mine closures have led to concentrate shortages and tightening metal supplies, pointing to a structural dislocation.

The LME zinc price is currently close to 10 year highs. While we model consensus prices to return to ~US\$1.07/lb over the next 5 years, at the current spot price of US\$1.58/lb, the Hayes Creek project appears undervalued if our operational assumptions prove correct.

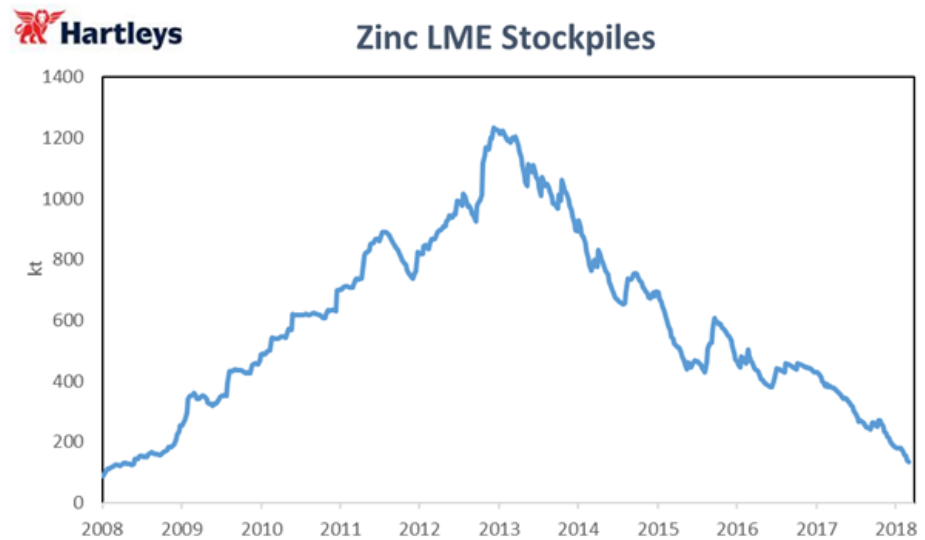
Fig. 16: Zinc Price (LME) & TCs



The LME zinc price is currently at its highest since August 2007

Source: Asian Metals, IRESS

Fig. 17: Zinc LME Stockpiles

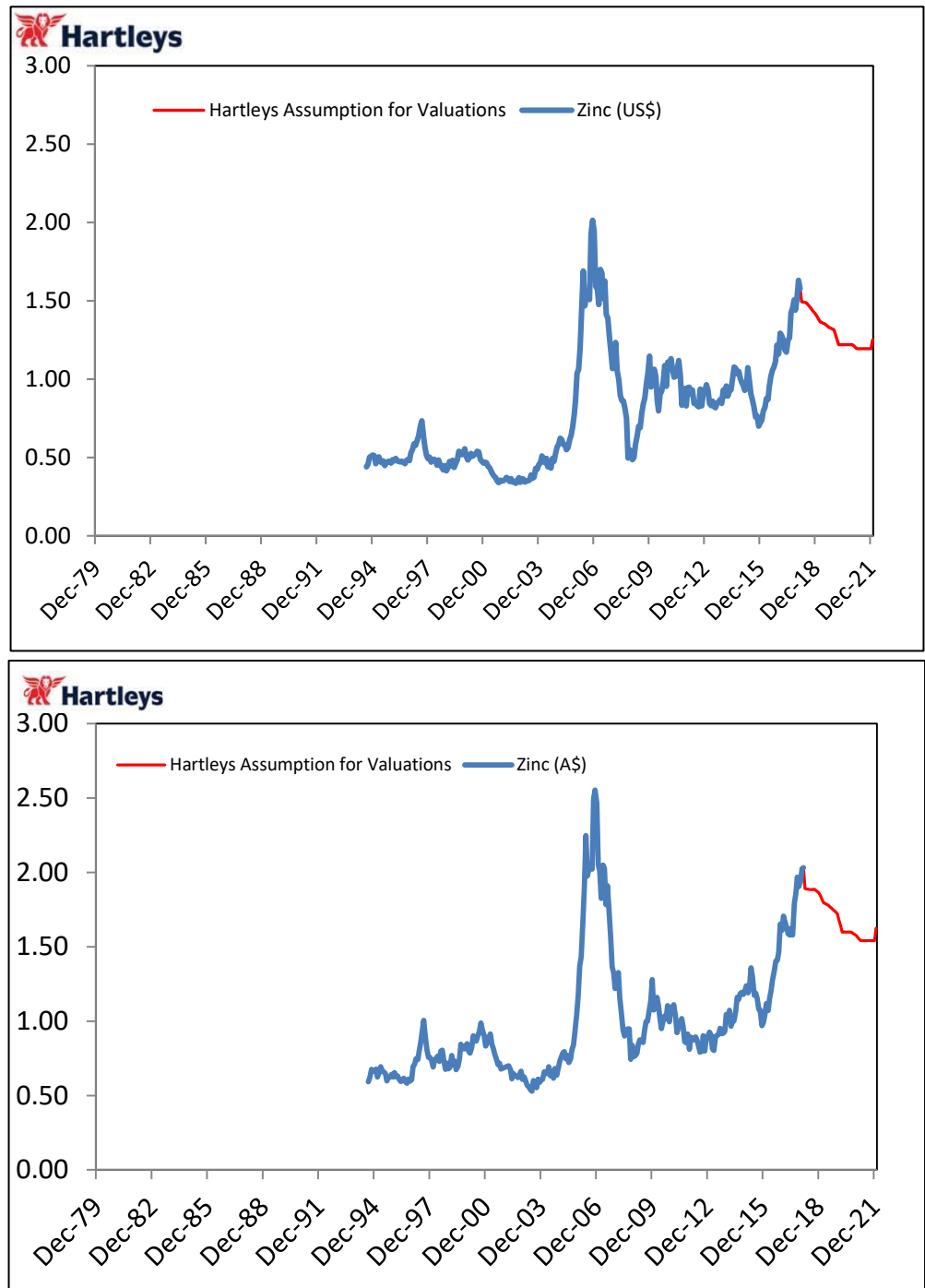


Zinc LME stockpiles have been in decline since 2013

Source: IRESS

Fig. 18: *Historic zinc price and Hartleys' consensus assumption*

*We expect Zn prices
to return to
~US\$1.09/lb over the
next 5 years*

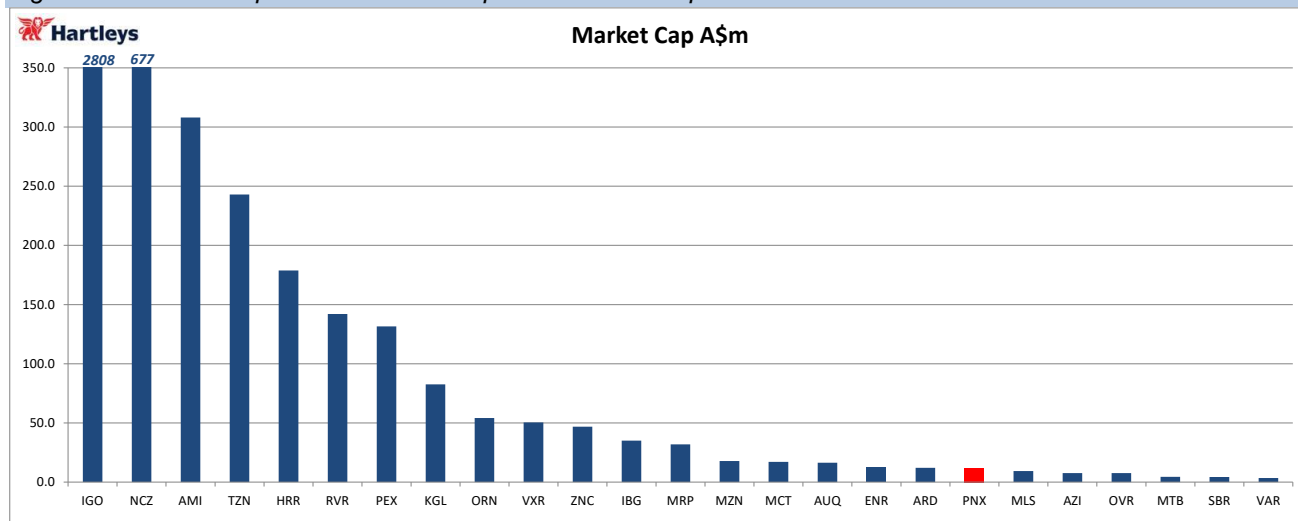


Source: IRESS, Hartleys Estimates

PEER COMPARATIVES

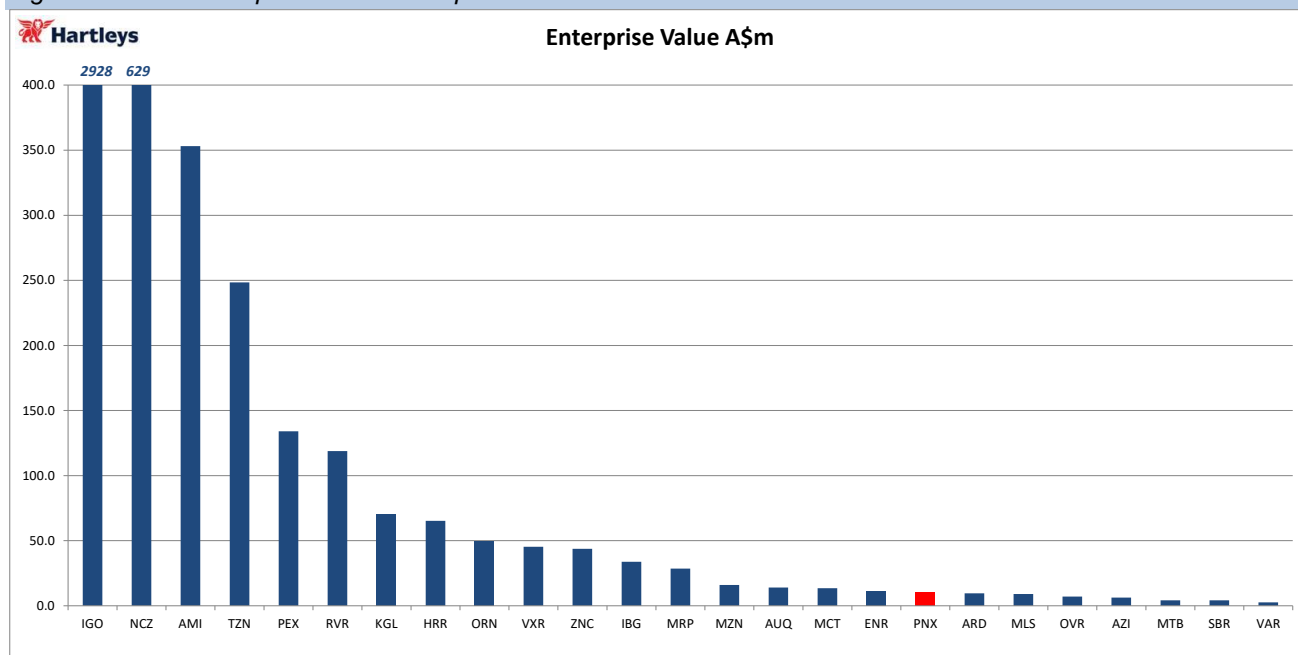
PNX is one of a handful of polymetallic developers on the ASX but given its production is skewed towards zinc, we have compared it primarily to zinc focussed developers/explores. The company has resource grades which compare favourably to peers, especially on ZnEq metrics.

Fig. 19: Zinc exposure market capitalisation comparison



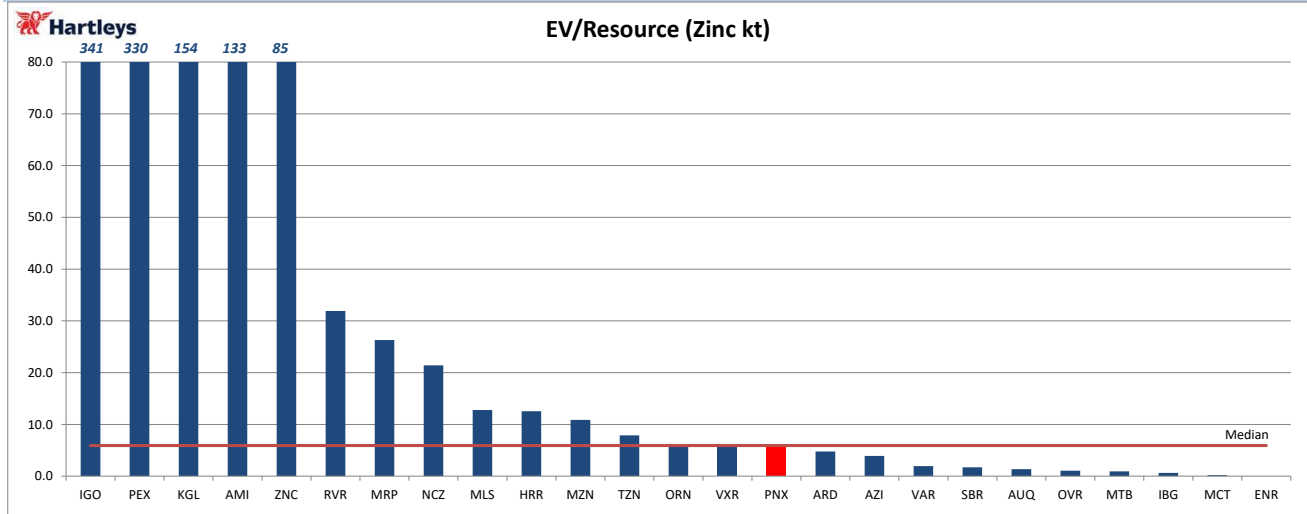
Source: Hartleys Research

Fig. 20: Zinc exposure EV comparison



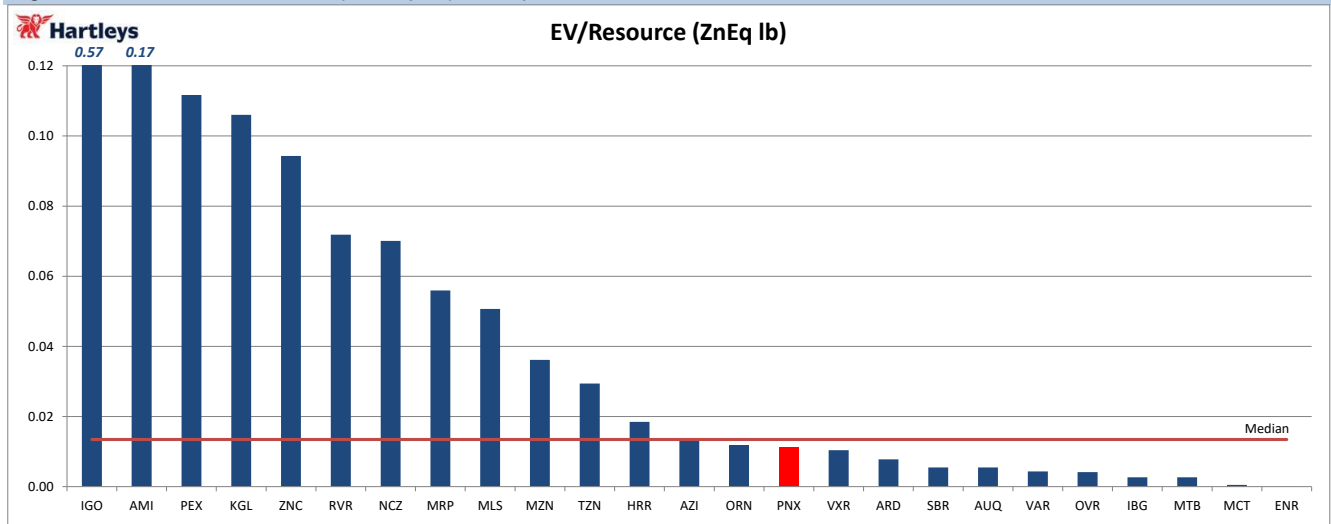
Source: Hartleys Research

Fig. 21: EV/Resource (Zinc kt) comparison



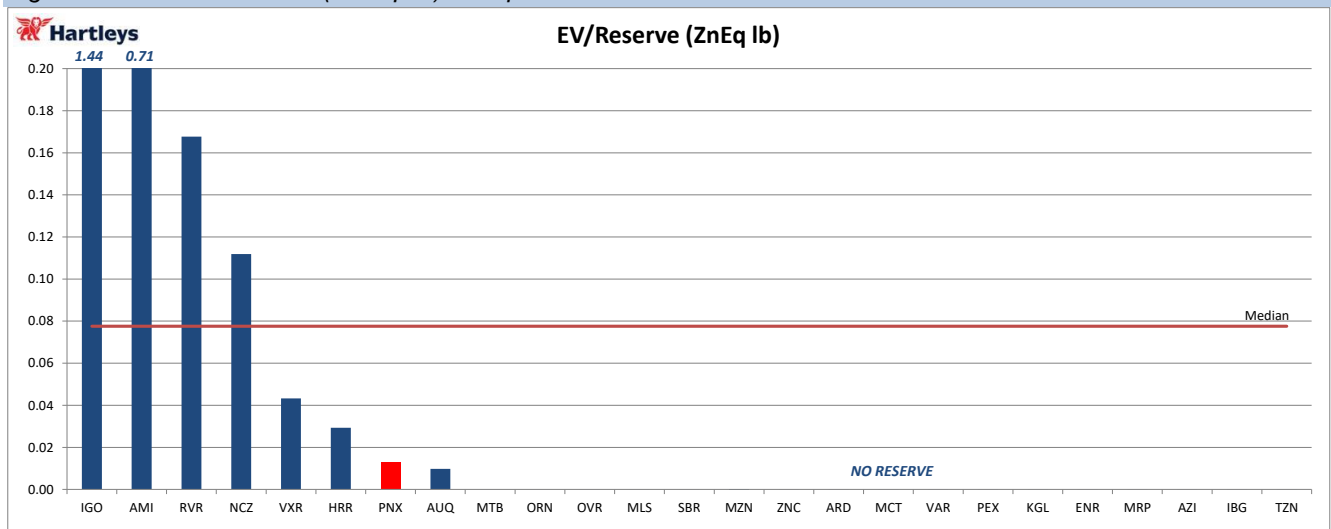
Source: Hartleys Research

Fig. 22: EV/Resource (ZnEq lb) comparison



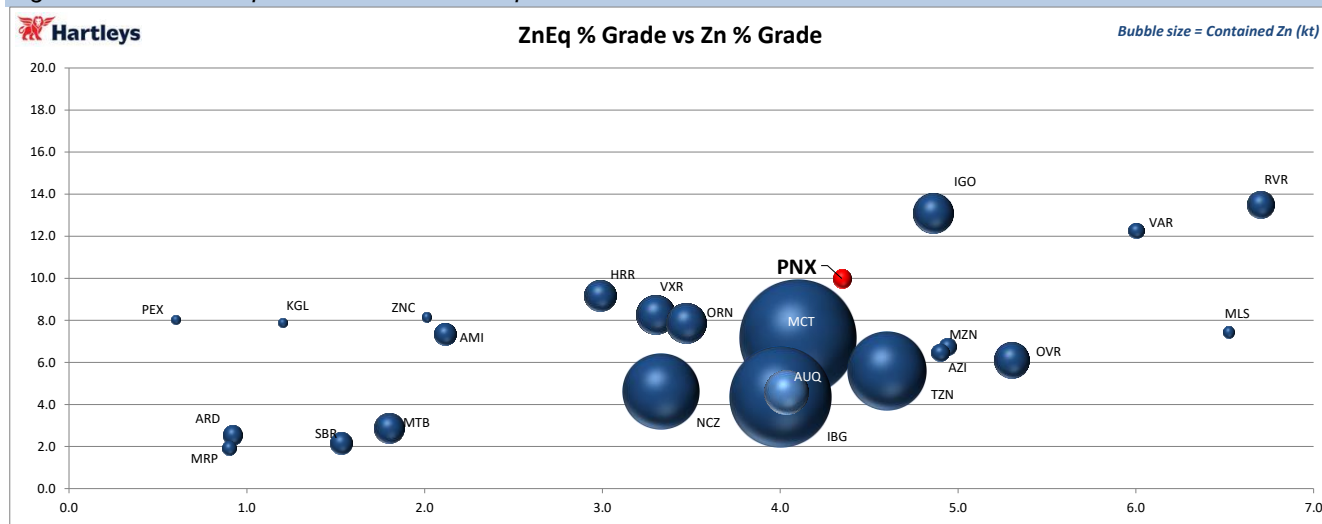
Source: Hartleys Research

Fig. 23: EV/Reserve (ZnEq lb) comparison



Source: Hartleys Research

Fig. 24: Zinc Eq vs Zinc Grade comparison



Source: Hartleys Research

MANAGEMENT AND DIRECTORS AND MAJOR SHAREHOLDERS

ECONOMIC EXPOSURE OF BOARD & MANAGEMENT

Economic Exposure of Board and key management					
Directors & Management	Position	Performance Rights	Shares Direct/Indirect	Total	Rank
Graham Ascough	Non-Exec Chairman		3,791,581	3,791,581	4
James Fox	Managing Director & CEO	4,450,000	6,577,381	11,027,381	2
Paul Dow d	Non-Exec Director		7,596,648	7,596,648	3
David Hillier	Non-Exec Director		3,428,571	3,428,571	5
Peter Watson	Non-Exec Director		11,549,967	11,549,967	1
Tim Moran	CFO and Company Secretary	900,000	300,000	1,200,000	7
Andy Bennett	Exploration Manager	2,250,000	988,095	3,238,095	6
		7,600,000	34,232,243	41,832,243	

Source: PNX Metals Limited

Director and Management resumes are taken from www.pnxmetals.com.au

Graham Ascough, Non-Executive Chairman

Graham Ascough (BSc, PGeo, MAusIMM) is a senior resources executive with more than 25 years of industry experience evaluating mineral projects and resources in Australia and overseas. He is currently non-executive Chairman of three other ASX listed companies: Mithril Resources Limited, Musgrave Minerals Limited and Avalon Minerals Limited. Graham, a geophysicist by training, has had broad industry involvement playing a leading role in setting the strategic direction for companies, completing financing and in implementing successful exploration programmes. He was the Managing Director of Mithril Resources Ltd from October 2006 until June 2012. Prior to joining Mithril in 2006, he was the Australian Manager of Nickel and PGM Exploration at the major Canadian resources house, Falconbridge Limited, which was acquired by Xstrata Plc in 2006. Graham was also a Councillor of the South Australian Chamber of Mines and Energy and Chair of its Exploration Committee from 2006 ~ 2012 and has strong ties to the SA Resources industry. He is a member of the Australian Institute of Mining and Metallurgy and is a Professional Geoscientist of Ontario, Canada.

James Fox, Managing Director & Chief Executive Officer

James Fox has been CEO of the Company since May 2012 and was appointed to the Board as Managing Director in November 2014. James has 20 years' experience in the mining industry. Prior to working for PNX, he was responsible for the development and operation of the Nickel Laterite Heap Leach project at the Murrin Murrin operations in Western Australia. James has held various senior processing positions including Process Manager at the Nifty Copper Operation in Western Australia. He has worked in the UK, Cyprus, Uganda and Australia in gold, lead, zinc, copper, nickel and cobalt mining operations.

Paul Dowd, Non- Executive Director

Paul Dowd has over 50 years' experience in the mining industry in Australia and many overseas countries. In April 2012 he retired as Managing Director of PNX, a position he assumed in September 2008, but remains on the Board as a non-executive director. Paul's experience includes executive management roles including Vice President of Newmont Mining Corporation's Australian and New Zealand Operations and Managing Director of Newmont Australia Limited, and as a senior public servant – head of the resources and petroleum department in the Kennett Government of Victoria. In 2015, he retired as Chairman of the SA Mineral Resources & Heavy Engineering Skills Centre but remains on the Board. He is a non-executive director of Oz Minerals Limited and Energy Resources of Australia Limited (ERA). Paul is also a board member of the Sustainable Minerals Institute (University of Queensland) and Chairman of the Mineral Resources Sector Advisory Council of the CSIRO.

Peter James, Non-Executive Director

Peter Watson, a founder of PNX Metals Limited, studied Law at Melbourne University and graduated with honours. He has practiced law for over 45 years, specialising in commercial, corporate, resources and trade practices law. He is admitted to practice in South Australia, New South Wales, Victoria and Western Australia as well as the High Court of Australia. For over 20 years Peter was a partner in the national law firm now known as Norton Rose Fulbright. During that time he established, and for 4 years managed, its Perth office. He also managed its Melbourne office for 2 years. In 1996 Peter joined Andersen Legal as its first Melbourne partner and in 1999 was recruited by Normandy Mining Limited as its group legal counsel and a group executive. Following the takeover of Normandy by Newmont Mining Corporation, Peter returned to private legal practice and founded the successful boutique law firm Watsons Lawyers in Adelaide which in 2016 merged with Piper Alderman. Peter is a member of the board of trustees of the Bethlehem Griffiths Research Foundation (a medical research charitable foundation) and a non-executive director of Felton Grimwade and Bosisto's Pty Ltd (a manufacturer and supplier of eucalyptus products and over-the-counter therapeutic products).

David Hillier, Non-Executive Director

David Hillier is a Chartered Accountant and has more than 40 years' experience in commercial aspects of the resources industry. He has served as Chairman and as a director of a number of public companies in the mining and exploration field, including Lawson Gold Limited and Buka Gold Limited. Throughout 2008 David was Chief Financial Officer and an executive director of AIM listed Minerals Securities Limited, based in London. Between 1989 and 2002, he held a range of senior executive positions in the Normandy Mining Limited Group of companies and was Chief Financial Officer of Normandy for six of these years. David is currently Executive Chairman of a private minerals exploration group.

Tim Moran, Chief Financial Officer & Company Secretary

Tim Moran has been the Chief Financial Officer and Company Secretary of PNX since 2012. Tim is a Chartered Accountant with 20 years' experience in accounting and finance and more than 10 years' experience in the mining and energy industries. He has a Bachelor of Commerce (Honours) from the University of British Columbia (Vancouver, Canada). Prior to commencing with PNX, Tim was the CFO and Company Secretary of a Canadian-listed oil and gas company in Calgary, Canada and before that spent 12 years with global accounting and professional services KPMG.

Andy Bennett, Exploration Manager

Andy Bennett commenced with PNX in January 2015. He has more than 20 years' experience in the exploration and mining industry with roles in a wide variety of geological settings at both junior and large companies. Andy has a solid technical background gained from exploration and underground mining positions with WMC Resources and BHP Billiton, where he was Chief Geologist during the Olympic Dam open pit expansion studies. He has also managed project developments, exploration projects and feasibility studies with junior iron ore, gold and uranium companies. Prior to joining PNX, Andy was part of the team which brought the Roper Bar iron deposits in the Northern Territory from discovery into production within four years.

MAJOR SHAREHOLDERS

PNX has four substantial shareholder as outlined below. Board and management currently hold 3.8% of direct, indirect and performance shares.

Board and management currently hold 3.8% of direct, indirect and performance shares.

Fig. 25: PNX Substantial Shareholders

Shareholder	Number of Shares	% Issued Capital
Marlei International Limited	156,766,095	14.40%
BNP Paribas Noms Pty Ltd	71,564,724	6.57%
Sochrastem SA	63,153,239	5.80%
Potezna Gromadka Ltd	58,957,053	5.41%
Asia Image Limited	43,802,204	4.02%
Talis SA	39,319,603	3.61%
Long Fortune Limited	27,075,000	2.49%
HSBC Custody Nominees (Australia) Limited	18,614,278	1.71%
BNP Paribas Noms Pty Ltd (Retail)	16,499,592	1.52%
Littlejohn Embrey Engineering Pty Ltd	15,706,044	1.44%
Forsyth Barr Custodians Ltd	13,638,179	1.25%
Mr Paul Dostal	11,428,571	1.05%
Ms Anne Maree Endean	10,000,000	0.92%
Ferguson Superannuation	10,000,000	0.92%
Latsod Pty Ltd	10,000,000	0.92%
Komon Nominees Pty Ltd	9,174,395	0.84%
Mr Roger Douglas Stables	9,131,578	0.84%
Mr Genghis Erkan	9,000,000	0.83%
Mr Peter James Watson + Ms Judith Waston	8,428,571	0.77%
ESM Limited	8,000,000	0.73%
Total Top 20	610,259,126	56.04%

Source: PNX Metals Limited

OPTIONS, CONVERTIBLES AND UNPAID CAPITAL

There are currently 85.5M options on issue at various strike prices and maturity dates.

Fig. 26: Options on issue or to-be-issued

Unpaid Capital				
Year Expires	No. (m)	\$m	Avg price	% ord
30-Jun-18	0.0	0.0	0.00	0%
30-Jun-19	65.5	3.3	0.05	6%
30-Jun-20	0.0	0.0	0.00	0%
30-Jun-21	20.0	0.3	0.01	2%
30-Jun-22	0.0	0.0	0.00	0%
TOTAL	85.5	3.6	0.04	8%

Source: PNX Metals Limited

FINANCIALS

PRODUCTION

Company guidance

The PFS has indicated ~12 months of waste stripping and ramp up prior to mining 1Mt of ore at Mt Bonnie over 2.25 years, before moving to the Iron Blow underground to produce ~2Mt over 4.5 years. While PNX refers to a 6.5 year mine line, total operational mine life will be 7.5 years, including stripping, at an annual average processing rate of 450kt. PNX expects to procedure an average of 18.3kt Zn, 17.7kozAu and 1.4Moz Ag (39.1kt ZnEq) annually in concentrates from the Hayes Creek project. A small amount of lead/copper concentrate (3.3kt) will also be produced as a by-product. PNX aims to complete a Hayes Creek DFS in 2H18, commence construction during 2019 and begin production in 2020.

Hartleys Forecasts

We forecast average annual production in line with PNX over the 6.5 years of mine life at Hayes Creek with average C1 cash costs of A\$0.83/lb ZnEq and AISC of A\$1.05/lb ZnEq.

PROFIT & LOSS

Fig. 27: Profit and Loss

P&L	Unit	30 Jun 17	30 Jun 18	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22
Net Revenue	A\$m	0.0	0.0	0.0	2.5	33.9	108.3
Total Costs	A\$m	-3.0	-0.9	-0.9	-4.2	-27.2	-64.7
EBITDA	A\$m	-3.0	-0.9	-0.9	-1.7	6.6	43.6
- margin	%	0%	-	-	-69%	20%	40%
Depreciation/Amort	A\$m	0.0	-0.8	-1.6	-5.0	-8.2	-8.9
EBIT	A\$m	-3.0	-1.6	-2.5	-6.7	-1.6	34.8
Net Interest	A\$m	0.0	1.2	3.1	1.2	3.1	1.2
Norm. Pre-Tax Profit	A\$m	-3.1	-0.4	0.6	-5.5	1.5	36.0
Reported Tax Expense	A\$m	0.4	0.0	0.0	0.0	0.0	-1.3
effective rate	%	-13.2%	0.0%	0.0%	0.0%	0.0%	-3.6%
Normalised NPAT	A\$m	-2.1	-0.3	0.4	-3.9	1.0	25.2
Abnormal Items	A\$m	-0.6	-0.1	0.2	-1.7	0.4	9.5
Reported Profit	A\$m	-2.7	-0.4	0.6	-5.5	1.5	34.7
Minority	A\$m	0.0	0.0	0.0	0.0	0.0	0.0
Profit Attrib	A\$m	-2.7	-0.4	0.6	-5.5	1.5	34.7

Source: Hartleys Research Estimates

The Company's guidance has indicated ~12 months of waste stripping before first commercial production

We forecast average C1 cash costs of A\$0.83/lb ZnEq and AISC of A\$1.05/lb ZnEq

BALANCE SHEET

Fig. 28: Balance Sheet

Balance Sheet	Unit	30 Jun 17	30 Jun 18	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22
Cash	A\$m	1.4	6.0	54.5	1.3	5.0	30.6
Other Current Assets	A\$m	0.6	0.3	0.3	0.3	0.3	0.3
Total Current Assets	A\$m	2.1	6.4	54.8	1.7	5.3	31.0
Property, Plant & Equip.	A\$m	0.0	-0.7	14.4	60.0	55.8	52.9
Exploration	A\$m	6.9	7.4	9.4	11.4	13.4	15.4
Investments/other	A\$m	0.1	0.0	0.1	0.1	0.0	0.0
Tot Non-Curr. Assets	A\$m	7.0	6.7	23.8	71.5	69.3	68.4
Total Assets	A\$m	9.0	13.1	78.7	73.1	74.6	99.3
Short Term Borrow ings	A\$m	-	-	-	-	-	-
Other	A\$m	0.6	0.1	0.1	0.1	0.1	0.1
Total Curr. Liabilities	A\$m	0.6	0.1	0.1	0.1	0.1	0.1
Long Term Borrow ings	A\$m	1.2	-	27.2	27.2	27.2	17.2
Other	A\$m	1.7	1.7	1.7	1.7	1.7	1.7
Total Non-Curr. Liabil.	A\$m	2.9	1.7	28.8	28.8	28.8	18.8
Total Liabilities	A\$m	3.5	1.7	28.9	28.9	28.9	18.9
Net Assets	A\$m	5.6	11.4	49.7	44.2	45.7	80.4
Net Debt (cash)	A\$m	-0.2	-6.0	-27.3	25.9	22.2	-13.5

Source: Hartleys Research Estimates

PNX currently has no debt or hedging

Debt

PNX currently has no debt requirements. We model debt funding of ~\$27m for the Hayes Creek capex requirement, ~40% of what we model for total preproduction capital.

Hedging

PNX currently has no hedging requirements.

CASH FLOW

Fig. 29: Cash Flow Statement

Cashflow	Unit	30 Jun 17	30 Jun 18	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22
EBITDA	A\$m	-3.0	-0.9	-0.9	-1.7	6.6	43.6
Working Capital	A\$m	2.1	-0.2	0.0	0.0	0.0	0.0
Operating Cashflow	A\$m	-0.9	-1.1	-0.9	-1.7	6.6	43.6
Income Tax Paid	A\$m	0.0	0.0	0.0	0.0	0.0	-1.3
Interest & Other	A\$m	0.0	1.2	3.1	1.2	3.1	1.2
Operating Activities	A\$m	-0.9	0.1	2.2	-0.5	9.7	43.6
Property, Plant & Equip.	A\$m	0.0	0.0	-16.7	-50.7	-4.0	-5.9
Exploration and Devel.	A\$m	-3.4	-0.5	-2.0	-2.0	-2.0	-2.0
Other	A\$m	0.0	0.0	0.0	0.0	0.0	0.0
Investment Activities	A\$m	-3.5	-0.5	-18.7	-52.7	-6.0	-7.9
Borrow ings	A\$m	0.0	0.0	27.2	0.0	0.0	-10.0
Equity or "tbc capital"	A\$m	4.4	5.0	37.8	0.0	0.0	0.0
Dividends Paid	A\$m	0.0	0.0	0.0	0.0	0.0	0.0
Financing Activities	A\$m	4.1	5.0	65.0	0.0	0.0	-10.0
Net Cashflow	A\$m	-0.2	4.6	48.5	-53.2	3.7	25.6

Source: Hartleys Research Estimates

We estimate \$65m pre-production capex required at Hayes Creek

Capex requirements

We estimate pre-production capex requirements of A\$65M at Hayes Creek to develop the plant and infrastructure. The PNX PFS estimates A\$58.3M. At the Mt Bonnie open pit we estimate A\$1.2M of mobilisation/demobilisation costs in line with the PFS but also include a small contingency of A\$3.3M for sustaining capital, which is lacking in the PFS. At the Iron Blow underground, we model A\$7.5M of pre-production capital as per the PFS and include the A\$26M of sustaining capital as a capital item, where PNX has included it as an operational cost in the PFS.

The PFS lacks provision of growth capital to fund ongoing exploration. We model A\$19M; A\$0.5M for the remainder of FY18 and then A\$0.5M per quarter from FY19 until the end of FY27 (current planned mine closure).

Free cash flow

We expect PNX to produce free cashflow in the order of \$28Mpa after stripping and ramp up. In the first year of the Iron Blow underground, we expect free cashflow to be a bit lower on account of underground development costs.

Dividends

We expect the Company to focus on development and exploration and hence dividends are unlikely for some time.

We expect PNX to produce free cashflow in the order \$28mpa after stripping in year 1.

EQUITY ISSUANCE

We assume substantial equity dilution is required to fund the project. We expect ~60% of the capex requirement to be funded through equity. In our model, we assume a capital raising to fund ongoing exploration and the completion of the DFS in FY18. We assume PNX raises \$5M, over two placements at an average price of 1.3c in the next 12 months, to fund the DFS and ongoing exploration. We also expect to see PNX raise ~\$38M @ 2c in FY19 to fund development of Hayes Creek. We model an additional 2.3Bn shares are issued to fund PNX into production over the next 2 years.

We model a 6.5 year mine life at Hayes Creek

SENSITIVITIES

FX exposure

PNX is exposed to FX changes affecting AUD commodity prices.

Interest Rate exposure

The Company currently has no exposure to interest rates.

Commodity price exposure

PNX is exposed to the zinc, lead, copper, gold & silver price.

We assume a nominal A\$25m (0.075cps) for exploration upside potential

VALUATION

Our sum of parts valuation for PNX is based on discounted cashflows and assumes a 7.5 year mine life (including ~1 year pre-strip) at Hayes Creek with production from early FY20 after a ~12 month development build time. Our modelling of Hayes Creek assumes total pre-production capex requirement of \$74M (\$65M for plant and infrastructure, \$1.2M for Mt Bonnie and \$7.5M for Iron Blow) and total sustaining capex of \$29M for the LOM. We model cashflows for the project with discount rates appropriate for the stage of production.

We model the Hayes Creek operations in line with the Company's PFS. We consider the PFS as a base case scenario and see potential for additional mill feed through mine extension and regional exploration at the likes of Burnside and Moline. We assume a nominal \$A30m (\$0.009/share) value for exploration upside potential. We believe PNX is well positioned for exploration success within its large tenement holding.

We assume new equity funding of ~2,318M new shares issued over three placements in the next 24 months. We consider this assumption to be conservative.

Fig. 30: Hartleys Sum of Parts Valuation for PNX

Share Price Valuation (NAV)	Riskd Est. A\$m	Est. A\$/share
100% Hayes Creek (pre-tax NAV at disc. rate of 12%)	55.5	0.016
Other Exploration	30.0	0.009
Hedging	0.0	0.000
Corporate Overheads	-5.9	-0.002
Net Cash (Debt)	1.9	0.001
Tax (NPV future liability)	-15.8	-0.005
Expected future franking credits	0.0	0.000
Options & Other Equity	3.6	0.001
Total	69.2	0.020

Source: Hartleys Estimates

Hartleys sum of parts
valuation for PNX is 2
cents per share

PRICE TARGET

Our price target for PNX is based on our NPV₁₂ base case for the Hayes Creek at spot and consensus prices. We also include a net cash backing scenario.

Fig. 31: PNX Price Target Methodology

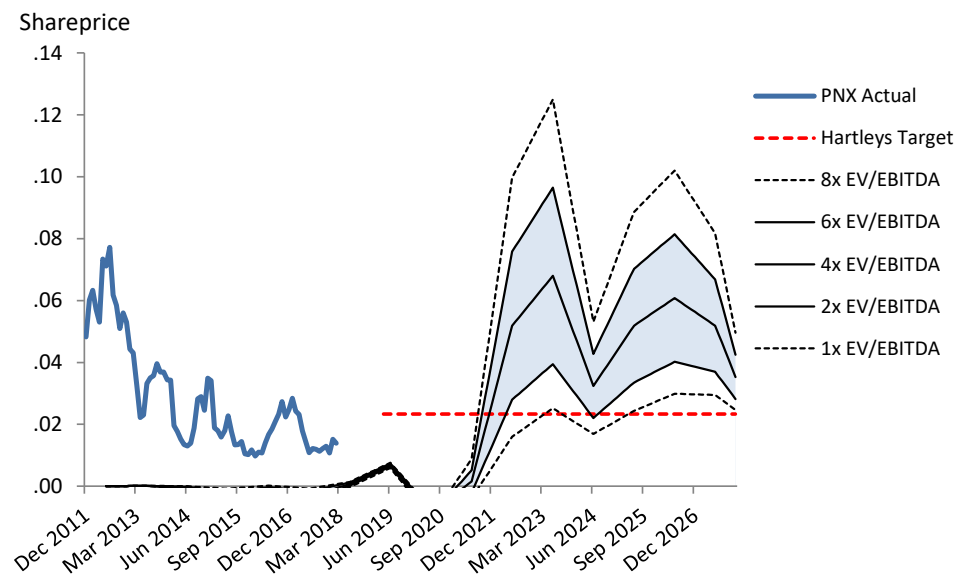
Price Target Methodology	Weighting	Spot	12 mth out
NPV12 base case	80%	\$0.020	\$0.025
NPV12 base case at spot commodity and fx prices	5%	\$0.025	\$0.035
Net cash backing	15%	\$0.002	\$0.002
Risk weighted composite		\$0.017	
12 Months Price Target		\$0.022	
Shareprice - Last		\$0.012	
12 mth total return (% to 12mth target + dividend)		86%	

Source: Hartleys Estimates

Hartleys 12 month
price target is 2.2
cents per share

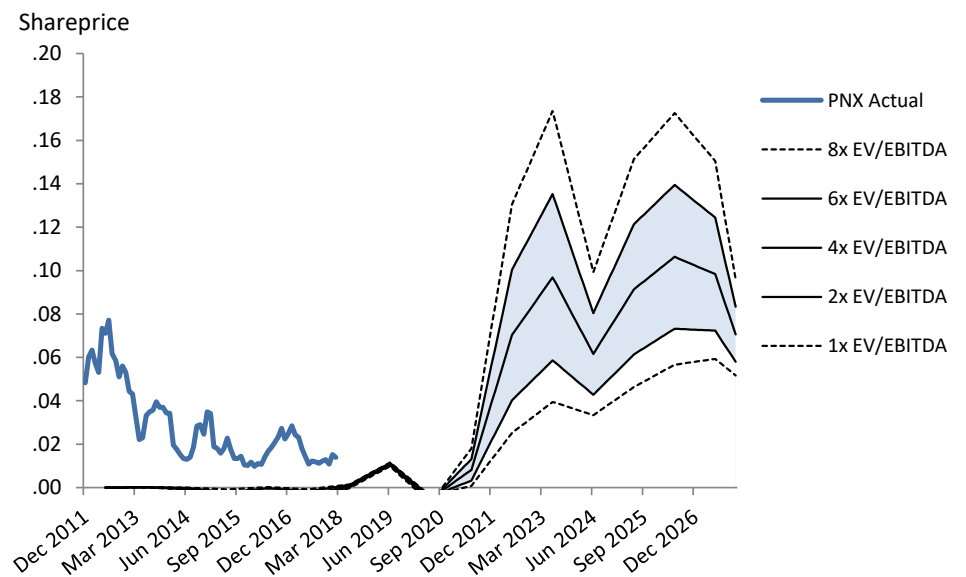
EV/EBITDA BANDS

Fig. 32: Using Hartleys base case commodity forecasts



Source: Hartleys Estimates, IRESS

Fig. 33: Using spot commodity prices



Source: Hartleys Estimates, IRESS

RECOMMENDATION & RISKS

INVESTMENT THESIS & RECOMMENDATION

We initiate coverage of PNX with a Speculative Buy recommendation. We see the Hayes Creek PFS as a base case scenario and see potential to extend beyond the current mine life through further discoveries and/or extension of the current mining inventory from Mt Bonnie and Iron Blow. We see potential for the discovery of further VMS deposits in the region given through advancements in (IP, EM etc.) geophysics.

PNX appears undervalued at both consensus and spot prices. Exploration success does not appear factored into the current market value of the Company, and investors wanting exposure to a polymetallic explorer/developer with a large tenement holding in Australia should consider PNX.

RISKS

Key risks for PNX include completion of further studies (DFS due in 2H18), funding (both for ongoing exploration activities and future development) and commodity sentiment/demand.

Fig. 34: Key assumptions and risks for valuation

Assumption	Risk of not realising assumption	Risk to valuation if assumption is incorrect	Comment
6.5 year mine life at Hayes Creek	Moderate	Meaningful	We model a 6.5 year mine life, which includes a large component of waste striping in year 1, in line with the PFS. If the operations vary largely from our modelling, our valuation will be at risk.
Model parameters	Moderate	Meaningful	We have made a number of large assumptions in our valuation of PNX, changes in these assumptions can change our valuation to both the upside and downside.
Exploration upside potential	Moderate	Meaningful	We assume exploration upside at Hayes Creek and further afield within the Burnside and Moline Projects. Some downside risk to our valuation exists if PNX has no exploration success.
Funding	Low to Medium	High	We model conventional debt & equity funding (40:60), we believe the low capex requirement should see our modelling assumptions achievable.
Orebody Risk	Low to Medium	Meaningful	As with all orebodies there is risk around geology, geotech and metallurgy.
Commodity prices	Moderate	High	PNX is reliant on commodity prices maintaining consensus performance and is very much economic at current spot prices.
Conclusion	<i>We have made significant assumptions but believe these are achievable.</i>		

Source: Hartleys Research

SIMPLE S.W.O.T. TABLE

Strengths	<ul style="list-style-type: none">- <i>Robust Zn-Au-Ag project</i>- <i>High grade</i>- <i>Low capex</i>- <i>Buoyant commodity prices</i>- <i>Dearth of Australian Zn projects</i>- <i>Exploration upside</i>- <i>Management's technical expertise</i>- <i>Project proximity to infrastructure</i>
Weaknesses	<ul style="list-style-type: none">- <i>Low cash balance</i>- <i>Orebody geometry</i>- <i>No cash flow generation until mid-2021</i>
Opportunities	<ul style="list-style-type: none">- <i>Extensions to Mt Bonnie pit; resource increase</i>- <i>Au opportunities at recent Fountain Head acquisition</i>- <i>Exploration upside on adjacent tenure</i>- <i>Ongoing metallurgical work to increase recoveries</i>
Threats	<ul style="list-style-type: none">- <i>Exploration downside</i>- <i>Commodity prices and market sentiment</i>- <i>Potential takeover</i>- <i>FX</i>

Source: Hartleys Research

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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.

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Hartleys has assisted in the completion of capital raisings in the past 12 months for PNX Metals Limited ("PNX"), for which it has earned gross fees of \$113,652.90. Hartleys has also provided corporate advice within the past 12 months and continues to provide corporate advice to PNX, for which it has earned gross fees of \$42,500 and continues to earn fees. Hartleys has a beneficial interest in 20 million unlisted options in PNX.

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