EQUITY RESEARCH

PAC PARTNERS

PNX Metals (PNX)

Developing a low-cost Zinc and Precious Metals Mine

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KEY POINTS

- Metallurgy confirmation de-risks feasibility work
- Potential for development of a viable zinc and precious metals mine, with pre-tax NPV of A$133m (as announced) and C1 cash cost globally competitive on our estimates
- Undervalued compared to risk-adjusted DCF valuation
- High grade gold potential in surrounding district with the end of wet-season signalling a re-start of drilling
- Good potential to grow resources organically in both base and precious metals
- Valuation of A$0.034/share vs A$0.013/share last price

RECOMMENDATION — Buy

Previous Recommendation	Initiation
Risk Rating	Very High
Current Share Price	$0.013
12 Month Price Target	$0.03
Price Target Methodology	35% of DCF valuation
Total Return (Capital + Yield)	250%
DCF Valuation (risk-adjusted)	$0.034/sh
Market capitalisation	$9.6m
Liquidity – Daily Value	$0.02m

PFS Released

PNX Metals (ASX: PNX) has released the results from the pre-feasibility study into the Hayes Creek zinc and precious metals project ("The Project") in the Northern Territory. The PFS largely confirms what was announced in March 2016 in the Scoping Study, with some variations, primarily on the preferred processing route for the ore.

In Summary, the PFS has indicated the following:

- **Up to 50% of revenue from Gold and Silver**, with an average of 1.2Mozpa of silver and 12kozpa gold in concentrate
- **Up to 50% of revenue from Zinc**, producing 14ktpa of contained zinc plus additional revenue from lead and copper (up to 10%)
- **First 2.2yrs open-cut at Mt Bonnie (1Mt) followed by 4.5 years underground (2Mt) at Iron Blow**
- **Pre-production capital of US$43m** (A$58m @ US0.74) approx. with additional capital of US$6m from Year 3 for underground development
- Announced Pre-tax NPV based on forward price curve of A$133m greater than the Scoping Study (A$109m)
- Higher zinc recovery than expected (90% vs 80% used in Scoping Study) and +15% increase in zinc production

The next phase of development includes completion of a Bankable Feasibility Study by 2018 to coincide with anticipated project approval 2H'18.

The project could be in production by late 2019, considering the anticipated short time frame of construction (12 months) subject to any long-lead items and wet-season impacts.

In the interim, exploration has re-commenced for gold and base metals could enhance project economics over the next twelve months as the BFS is completed.

Investment Summary

We see PNX as having good potential for re-rating should the DFS confirm the project potential, and exploration underway in the interim identify further potential ore-feed, with any upwards movement in precious metal and zinc prices in A$ terms a bonus from these levels.

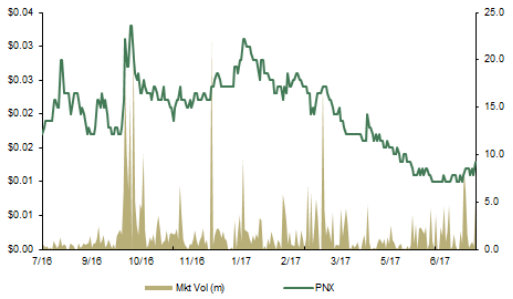
We Initiate with a Buy Recommendation and a price target of $0.034/sh (+150% on current price of $0.013/sh).

Financial Forecasts & Valuation Metrics

Y/e ($m)	FY'20E	FY'21E	FY'22E	FY'23E
Revenue	115	124	84	107
NPAT	51	64	31	41
EPS (cps)	2.6	4.1	0.5	1.6
DPS (c)		-	-	-
EV / EBITDA (x)	0.9	(0.4)	(1.9)	(0.8)
PER (x)	0.5	0.3	2.6	0.8
Dividend Yield	-		-	-
Gearing	0.0	(0.5)	(0.6)	(0.6)
Interest Cover (x)	16.3	na	na	-

Source: PAC Partners estimates

PNX Share price performance



Source: Iress

Investment Thesis

Rare mix of Zinc+ precious metal exposure

There are a number of reasons we consider PNX Metals to be an attractive investment, for those seeking exposure to silver/gold and zinc. Below we have listed 10 key points which in our opinion are worthy of listing as reasons to hold PNX:

High grades & strong economics

Relatively low capital and short payback

Great location and infrastructure

1. **Undervalued: Valuation of A$0.034/share vs A$0.013/share price** (based on risk-adjusted DCF valuation)
2. **High-Grades**: Mining inventory contains **high grade zinc-gold-silver sulphide** ore amenable to flotation. Resource of **4.1Mt @ 10.9% ZnEq** (3.7% Zn, 122g/t Au, 1.8g/t Au, 0.9% Pb, 0.25% Cu)
3. **Strong Economics**: Fast payback of less than 15 months driven by the initial 2 years of low-cost open-pit mining at Mt Bonnie (open-cut stage generates A$122m EBITDA on our numbers)
4. **Low Capital Hurdle**: Estimated capex of US$43m (A$58 @0.74) provides a relatively low capital hurdle for Project financing
5. **High Margin**: Low unit operating costs and high net smelter returns resulting in expected high margins (we estimate net C1 of US$0.22/lb Zn)
6. **Commodity Mix/Hedge**: Project revenues are split evenly between zinc, silver and gold providing a natural hedge against individual commodity price fluctuations
7. **Risk Managed**: Low up-front capital, very short payback period, low throughput rates and near-surface deposits result in the Hayes Creek Project being a low risk enterprise with an IRR of greater than 70% on our commodity price assumptions
8. **Commodity Price Outlook**: Attractive mix of commodities with strong outlook & price upside potential
9. **Exploration Potential**: Strong exploration potential with VMS deposits typically occurring in clusters; multiple exploration targets in prospective near-mine lithology, exploration drilling re-commenced at Moline. Addition of more gold-rich sulphide resources could boost value.
10. **Infrastructure**: Located in existing infrastructure corridor with rail, gas, power and other mining operations, only 180km or 1.5hrs drive from Darwin.

PFS Summary

Low cost, high margin Australian zinc project

The recently published PFS confirms the potential for PNX's Hayes Creek Project to become a low-cost, high-margin Australian zinc and precious metals mine. Key headlines from the recent PFS release include:

PFS shows a project producing 39ktpa of ZnEq at low cost

1. Pre-tax NPV10% of $133 million, IRR of 73% and a very short 15 month pay-back period
2. Project net smelter revenues of $628 million over a 6.5 year mine life
3. A$266 million pre-tax net cashflow estimated over Life of Mine at an average of $41 million per year
4. Low up-front capital of $58 million to construct the 450,000tpa sulphide flotation processing plant and associated infrastructure to infrastructure to produce two concentrates for sale (Zn + Ag/Au/Pb/Cu)
5. 39Ktpa zinc equivalent (18Kt zinc,1.4Moz silver, 15koz gold)
6. Production Targets are based on Mineral Resources classified as 98% Indicated
7. PNX is proceeding with a DFS, with mine approvals forecast in late 2018

The mining inventory of 3Mt @ 10.7% Zinc equivalent [1], is to be mined over approximately 6.5 years at 450kta, with the first two years of open cut mining to be followed by 4.5 years of underground, with additional potential in the surrounding area to extend mine life.

[1]Refer to commodity price assumptions shown on back page and JORC Resource p5

Project Locality

Project is well situated, only 180km from Darwin

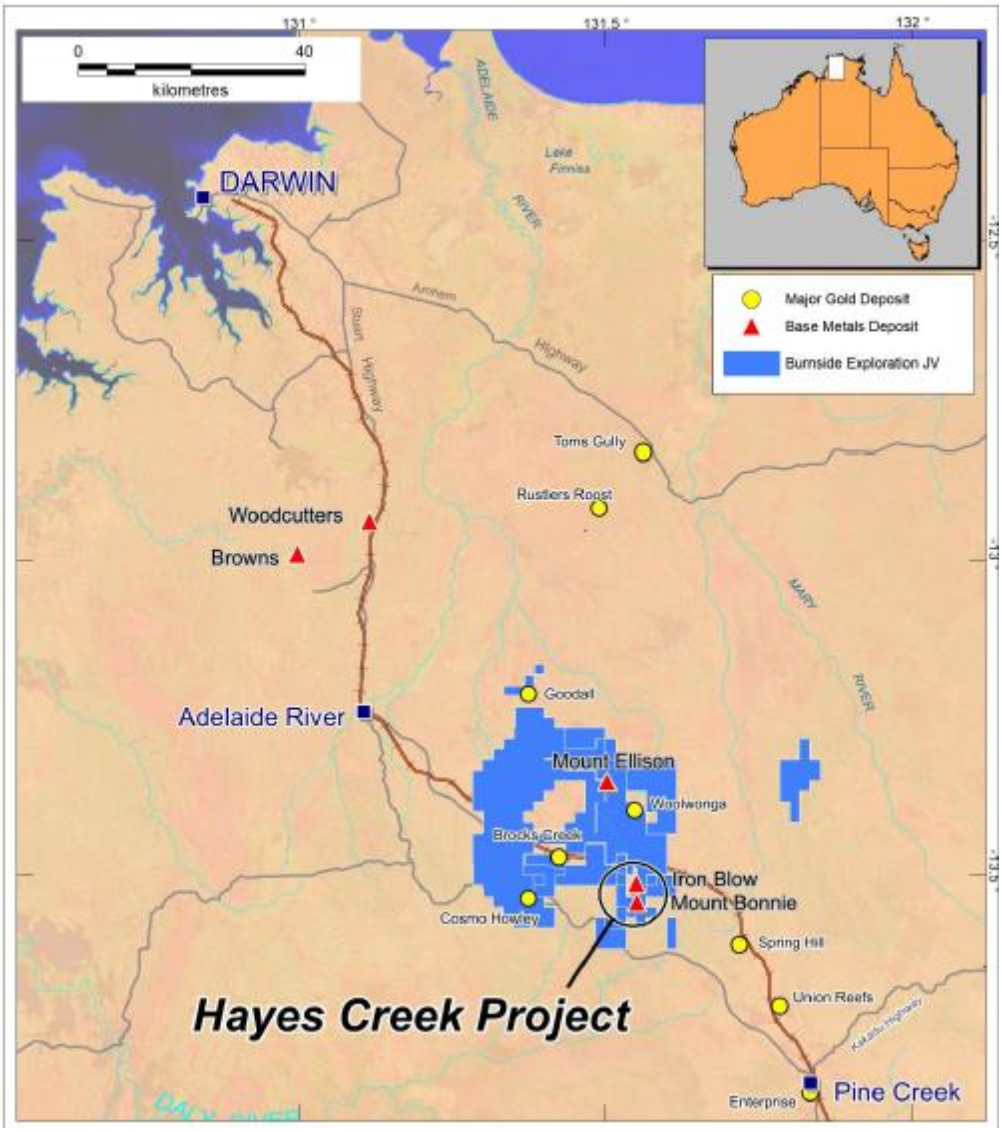
The Hayes Creek Project consists of the Mt Bonnie and Iron Blow polymetallic deposits, located approximately 180km to the southeast of Darwin along the main Stuart Highway.

The project is well serviced by local infrastructure including rail, road, high voltage powerlines, water, and Kirkland Lake's (TSX: KL) mining operations at Cosmo and Union Reefs.

A gas pipeline traverses in close proximity and there is a sealed highway from Darwin 1.5hrs away, right on the project doorstep. A skilled workforce and available contractors live locally and the absence of remote locality means mobilisation and residential costs are a magnitude lower than other, more remote mining development proposals.

This is likely to mean less risk of capital cost overruns due and tighter scheduling when compared to a project a days drive from a decent residential settlement. The presence of other mining infrastructure in the area (such as the Cosmo Mine) creates future possibilities for collaboration.

Project is close to Darwin



Source: Company Report

Project Background

The Mt Bonnie and Iron Blow deposits were first identified in the late 1800's, and limited open pit and underground mining occurred around that time. From 1975 Geopeko Ltd and BP Minerals conducted some work, including delineation of a small resource.

Over 4Moz have been produced from the Pine Creek area

Since gold was first discovered in the region, almost 4Moz are believed to have been produced from the Pine Creek Orogen (Crocodile Gold, 2012). There are believed to be over 800 documented gold occurrences in the area.

During the mid-1980s, Henry and Walker Group Ltd mined oxide ore from small open pits, extracting gold and silver by (110Kt @ 7g/t Au and 2330g/t Ag), but the primary sulphide orebodies remained untouched.

In the early 2000's Hill 50 Ltd and Northern Gold formed a JV to develop and explore the Burnside area, with later partners including Harmony Gold, AngloGold Ashanti and later GBS Gold Australia. Crocodile Gold purchased the tenements in 2009 and conducted geophysics and a limited amount of other work.

PNX initially acquired the project in 2014, and has a regional earn-in for exploration around the deposits

In 2014, PNX acquired 14 mineral leases from Newmarket Gold NT Holdings Pty Ltd (TSX: NMI, formerly Crocodile Gold). The Mt Bonnie and Iron Blow deposits were purchased 100%, with a 30% clawback right for 3x expenditure. In December 2016, Newmarket was acquired by Kirkland Lake (TSX: KL). Under the existing arrangement, Kirkland Lake retains a clawback right to a 30% interest, with a cash payment of 3 x historic expenditure by PNX (at present A$14m approximately). This right expires 6 months following publication of the PFS.

Under the earn-in arrangement for the surrounding exploration leases (the Burnside Project), PNX can earn up to a 90% interest in the leases. At the start of 2017 a 51% economic interest had been earned.

PNX released the results of the Scoping Study at Hayes Creek in March 2016. A pre-tax NPV of A$109.4m was published, assuming capital of A$54m for plant construction and mine infrastructure with an additional A$10.9m in Year 2 for the underground mine development.

The study assumed a total of 2.8Mt of ore mined, at 400Ktpa over a 7-year mine life. Open-cut mining at Mt Bonnie for 1.8 years would be followed by underground mining for 5.2 years at Iron Blow.

The revenue split was calculated at 41% Zinc, 24% silver and 25% gold. Recoveries of 80% for zinc, 70% for silver and 51% for gold were assumed.

The Mt Bonnie open cut would be transported by road to the proposed plant site at Brock Creek, a distance of 17.6km. A total of 725Kt at a strip ratio of 8:1 was scheduled. The Iron Blow underground mine was designed using sub-level open stoping with cement and rock pastefill.

Geology and Resources

The Pine Creek Orogen in the NT consists of a metamorphosed sedimentary basin, with late Archaean granitic basement covered by marine sediments. Numerous rock types typical of such basins are present, including shales, carbonates, ironstones, and mafic to felsic volcanics. The basin covers an area of 66km^2.

Gold mineralisation is found associated with anticlines, shear-zones and thrusts relating to the Cullen Granite. The base-metal mineralisation at Iron Blow and Mount Bonnie is described as VMS-style. Some of gold mineralisation (Iron Blow breccia) is thought to be a later epigenetic event.

Recent drilling has increased overall tonnage by 10% to 4.1Mt of resources

The Mt Bonnie and Iron Blow Mineral Resources were recently updated following resource definition drilling work undertaken as part of the PFS. In overall tonnage terms, there was an increase of 10% to 4.1Mt, including delineation of shallow extents at Mt Bonnie. The resources were drilled on an approximate 20m x 20m or 20m x 40m spacing.

Contained metal reduced slightly, with a 7% decrease in contained gold to 238koz, namely at Iron Blow (Mt Bonnie gold content increased from 52koz to 67koz. Contained silver and zinc remained approximately the same with 16.2Moz of contained silver and 178Kt of Zinc. The confidence increased from 12% indicated and 88% inferred to 85% Indicated and 15% Inferred (JORC 2012).

Latest JORC Resources (updated May 2017)

JORC Resource Table

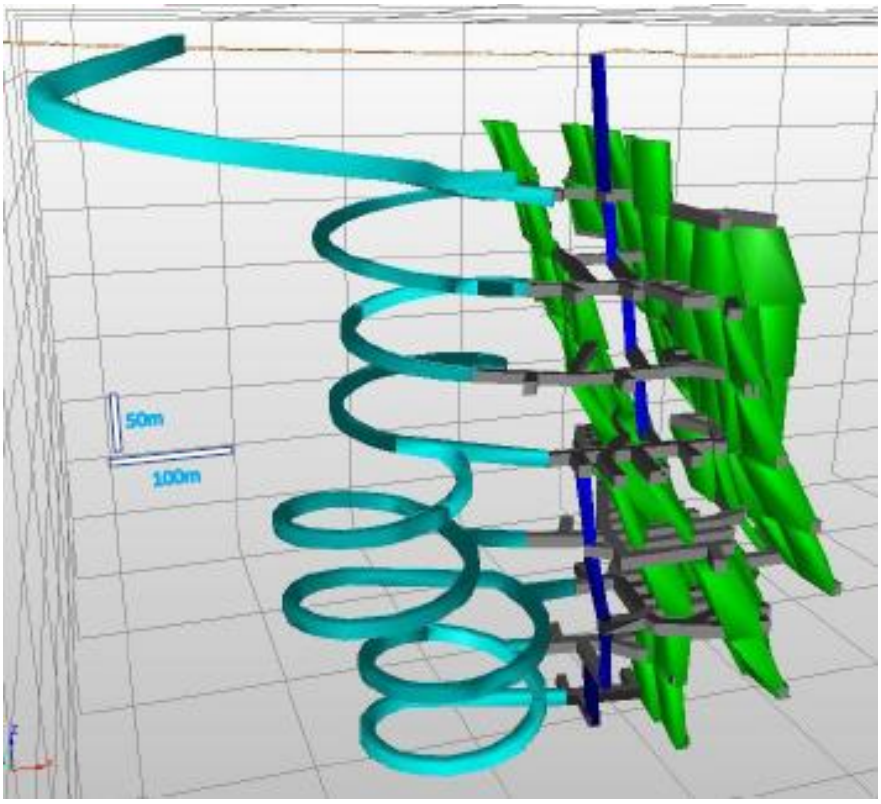
Iron Blow JORC Resource Estimate (JORC 2012)							
Classification	Cut off AuEq (g/t)	Tonnes (Mt)	Au (g/t)	Ag (g/t)	Zn (%)	Pb (%)	Cu (%)
Indicated	1.0	2.08	2.19	143	5.49%	0.91%	0.30%
Inferred	1.0	0.45	1.71	27	1.11%	0.18%	0.07%
Total		**2.53**	**2.10**	**122**	**4.7%**	**0.78%**	**0.26%**

Mt Bonnie JORC Resource Estimate (JORC 2012)							
Classification	Cut off Zn (%)	Tonnes (Mt)	Au (g/t)	Ag (g/t)	Zn (%)	Pb (%)	Cu (%)
Indicated	1%	1.38	1.41	128	3.96%	1.15%	0.23%
Inferred	1%	0.17	0.80	118	2.11%	0.87%	0.16%
Total		**1.55**	**1.34**	**127**	**3.76%**	**1.12%**	**0.22%**

Source: Company Report

Iron Blow deposit starts close to surface, reducing the cost of pre-ore underground development

Iron Blow PFS underground design



Source: Company Report

2017 Preliminary Feasibility Study (PFS)

The PFS commenced in March 2016. The final study was released on 11 July 2017.

Work conducted as part of PFS included drilling for reserve definition (as discussed in the previous section), metallurgical test work, environmental design and permitting (EIS due to be submitted for the project development by the end of 2017) and other engineering work including plant design (increased capacity to 450ktpa).

Potential for gas-fired power generation on site

Site selection for the preferred plant location has been carried out, along with geotechnical and hydrology studies and biological surveying. All mining infrastructure is to be located within existing mineral lease boundaries. The preferred site is now the Fountain Head open pit, located approximately 12km north of Iron Blow (see map below). This lease is owned by Kirkland Lake, and access terms are currently being negotiated. This site has capacity for all tailings and waste in an existing open pit.

The preferred power option is a gas-fired power station, connected to the nearby Amadeus gas pipeline which runs through the site, with diesel as an alternative/backup.

The open-cut strip ratio at Mt Bonnie is little changed, with additional tonnage in the proposed open-cut extending the life from 1.8 years to 2.2 years or around 1Mt of ore feed and plant throughput increasing from 400Ktpa to 450Ktpa.

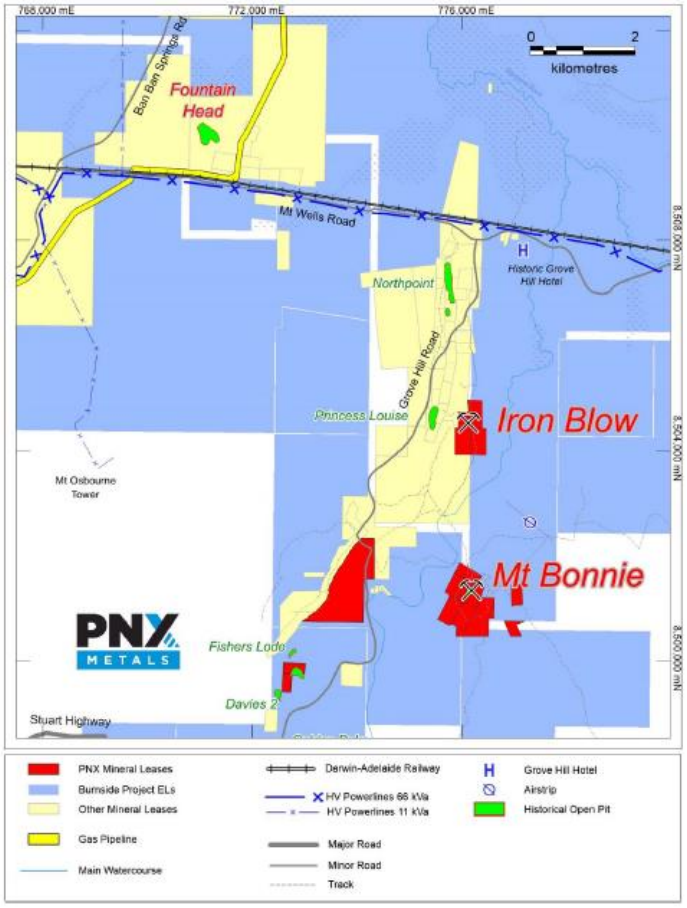
11m @ 332g/t Ag from surface, not in mine design yet

At Iron Blow, near-surface intersections (including 11m @ 332g/t Ag, 0.63g/t Au) have potential to add a small open-pit to the mine plan. We have not considered this in our modelling work, however note this could provide some minor benefit to the overall economics.

The proposed underground mine at Iron Blow is long-hole stoping, with cement-rock backfill. Mineralised lenses to be mined are steeply-dipping, varying in width from 20m to 40m on average. Bottom-up stoping will be adopted, with the box-cut and portal constructed in the base of the existing historical open-pit. A 2km, 5.5m x 5.5m, 1:7 ratio decline will be constructed, with a minimum 35m radius. Other capital development of 1.57km is planned, with 280m vertical development LOM.

Location of Mine-site & Infrastructure

Well situated adjacent to roads and powerlines



Source: Company Report

Development Pathway

The key changes to the assumptions used in the Scoping Study and the parameters emerging from the PFS include:

Increased tonnage and plant throughput since the Scoping Study was released

- The production of a bulk concentrate, to recover silver and gold, rather than the Merrill Crowe/Dore route that was considered in the Scoping Study
- Higher anticipated recovery of silver at 75% (vs 70% used in the Scoping Study)
- Higher anticipated zinc recovery than in scoping study (90% vs 80%) +15% increase in contained metal.
- Increased tonnage identified at Mt Bonnie (now an additional 0.4Mt in the resource)
- Slightly lower ore grades (notably zinc at Mt Bonnie, and gold at Iron Blow)

Outcomes of these changes include:

- Revenue from lead and copper likely (not included in the Scoping Study)
- Lower overall payability for gold and silver (due to sale of concentrate not doré production at site)
- Slight increase in capital and operating costs due to addition of additional flotation circuit to recover two concentrates
- Similar project NPV as the Scoping Study (at the prices utilised in March 2016) with some positives offset by other factors such as lower paid amounts of gold and silver (higher quoted NPV due to different commodity and FX assumptions)

A summary of our current assumptions compared to the Scoping Study & PFS are shown below:

Higher anticipated recoveries than assumed in Scoping Study

The outlook for metal prices such as zinc and gold remains positive

2016 Scoping Study Vs PFS and PAC Assumptions

Parameter	Scoping Study	PFS Release	Our Assumption
Reserve (Mt)	2.8	3.0	3.0
Mine Life (450ktpa)	7.0 (400ktpa)	6.5	6.5
Recovery (%Zn/Pb/Cu)	80/60/60	90/57/61	90/57/61
Recovery (%Au/Ag)	51/70	56/75	56/75
Annual Prod (Kt Zn contained)	13.7	15.8	15.8
Annul Prod (Koz Au/Ag)	14/1290	14.6/1430	14.6/1430
Opex (A$/t) – LOM average	124	103	103
Capex (A$m) - LOM*	64.9	117	117
A$ assumption (US$)	0.78	0.73	0.76
Zinc Price (A$/t)	3276	3520	3487
Gold/Silver price (A$/oz)	1585/24	1766/26.6	1645/21.7
Gross Pb Revenue (A$m)	NA	54 (inc Cu)	48 (inc Cu)
Cash cost (LOM, C1)	NA	NA	US$0.22/lb
NPV (10%) Pre-tax	A$109m	A$133m	A$103m

Source: Company Reports and PAC Partners estimates

**Scoping Study included underground sustaining capital in the operating cost assumptions, PFS separated out*

Exploration Potential

9Moz of gold previously identified in the district

The Hayes Creek region has known gold resources of 9Moz, with >3Moz of past production. Historically, most exploration has been limited to outcropping regions, with little drilling below 30m.

The company has an agreement to earn up to 90% of the surrounding 1,700km^2 of exploration tenure from Kirkland Lake . A 51% interest (excluding Uranium) has already been earned (refer to June, 2017 exploration presentation by PNX), and through expenditure of a further A$2m (including A$0.5m on the PFS work at Hayes Creek) by December 2018 PNX will have earned 90%.

In the last two years PNX has undertaken a systematic review of the region's potential, with a number of new high priority gold targets recently identified including Cookies Corner, School, Tumbling Dice and Moline prospects.

Anomalies and VTEM targets have never been drilled

In addition, a number of base-metal targets have been identified including: Mt Ellison, Burnside (Margaret, Yellow track), and El Dollarado at Moline. In these areas, a review of historical exploration has identified larger soil anomalies which have never been drilled, along with VTEM targets.

7m @ 11.9 g/t at Moline requires follow-up, with drilling to commence late July, 2017

Planned work for the dry season includes drilling at Moline (School prospect) to further define mineralisation, including **7m @ 11.9g/t Au** (from 115m, announced 5/12/16) and 9m @ 2.7g/t (from 68m) following up historic intercepts of 2m @ 22g/t Au (from 52m) and 2m @ 19g/t Au from 89m.

At Moline resource estimation work is planned, following up the historic (Non-JORC) resource of 52koz @ 2.6g/t Au. Ground geophysics is also planned to follow up previously identified geochemical anomalies. Drilling at Moline is currently underway.

A new interpretation of structural controls on mineralisation (high grade shoots) should enable better targeting of the potential ore zones. In addition, the use of VTEM and IP geophysics is helping to identify target areas. A total of 15 RC holes are to be drilled at Moline in late July, 2017.

Broad gold intercepts at Tumbling Dice include 30m @ 2.3g/t Au

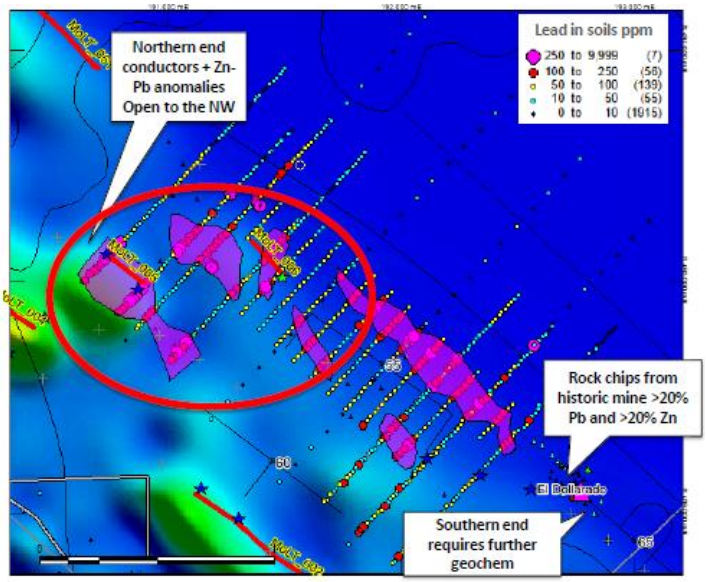
Adjacent to Moline, the Tumbling Dice prospect is to be followed up. Historic intersections, open at depth, include 15m @ 1.9g.t Au (MRC633) and 30m @ 2.3g/t Au (See Diagram, following).

At Cookies Corner prospect, past drilling by WMC in the late 1980's revealed near-surface intercepts including 3m @ 20g/t Au (from 3m), supported by high grade rock chips up to 29g/t Au. A large, 1km long gold anomaly has been defined by recent sampling conducted by PNX, 40km NW of Hayes Creek. PNX plan to drill 15 holes at this location in late July, 2017.

Any resource addition from Moline and other non-JORC resources and target nearby could prove attractive for PNX to develop, as part of their regional strategy focused around Mt Bonnie and Iron Blow VMS deposits. We consider it unlikely Kirkland Lake would want to claw-back any sulphide discovery (at 3x historic expenditure), as the Cosmo Mine mill is not equipped to treat sulphur-rich ores via flotation currently. We consider the company strategy to add gold-rich sulphides to the potential mining inventory has potential to provide a boost to valuation.

An additional area with a historic (non-JORC 2012) resource includes Santorini (48koz @ 1.14g/t Au). At the Hercules Target, open assays include 16m @ 12.5g/t Au, 8m @ 9.7g/t Au and 7.7m @ 6.22g/t Au. Drilling at this area is planned .

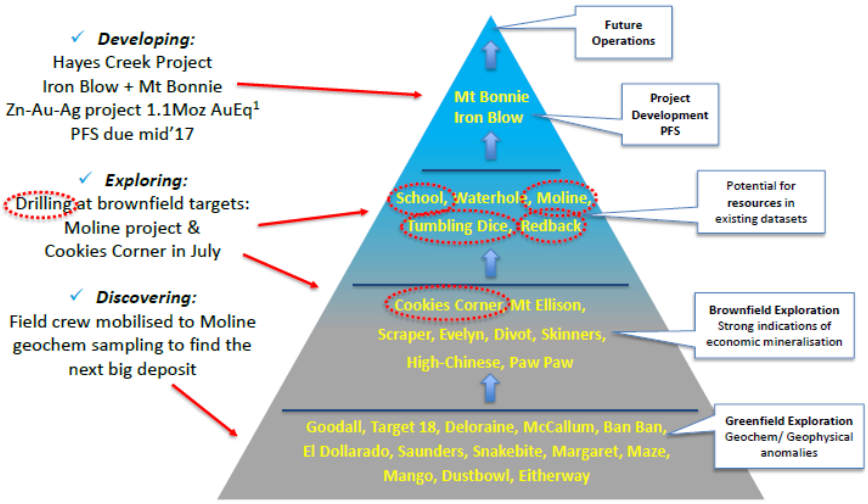
El Dollarado Base Metal (Pb/Zn) anomaly



Source: PNX Presentation, June 2017

PNX exploration and development targets

Numerous targets for gold and base metals in the district



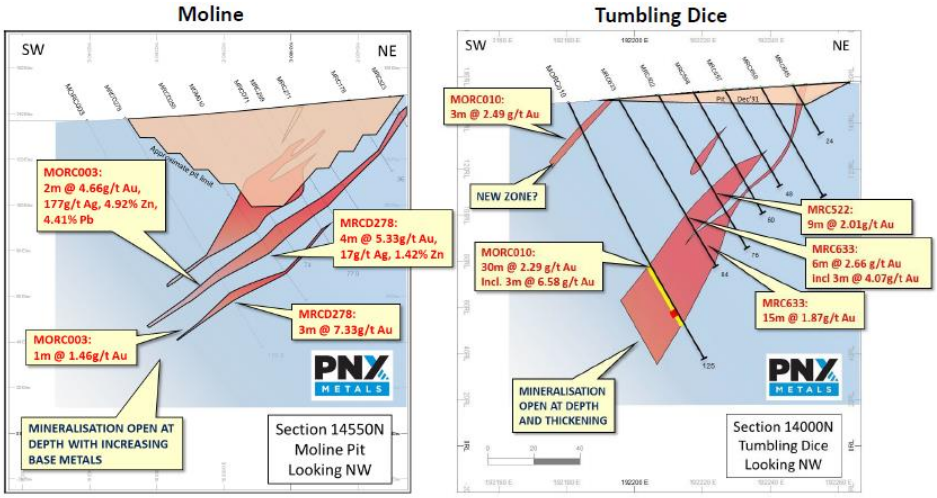
[1]AuEq = All metals expressed as an equivalent gold grade (see notes relating to Mineral Resources for full definition and assumptions)

Source: PNX Presentation, June 2017

Priority exploration targets at Moline and Tumbling Dice (adjacent to Moline)

2017 exploration targets at Moline and Tumbling Dice.

Aiming for a maiden JORC 2012 resource at Moline in 2017



Source: Company Report

Company Valuation

Valuation of mining projects at the PFS level is always inherently subjective, and involves many assumptions on the probability of outcomes relating to metallurgy, funding, commodity prices and cost factors.

For this reason practitioners typically adopt a range of methods for valuation, including peer comparisons and Discounted Cashflow (DCF) methodologies.

The peer comparison methodology in this instance is of limited use for a number of reasons, primarily due to the unique nature of the orebody. For example how do you compare a polymetallic orebody with 45% of the potential revenue from gold and silver and 48% from zinc, to say, an orebody with 90% of revenue from zinc, or one with 100% from gold and silver?

DCF methodology adopted for valuation

The best method and the one we have therefore adopted is the DCF methodology, which we then adjust for risk relating to completion of the DFS and changes to operating parameters, timing of production, and funding (and equity dilution).

We prefer to use spot commodity prices of the day (approximately) to avoid any bias from assumption of higher or lower prices in the future. This is particularly applicable to gold and base metal pricing, less so perhaps to bulks and speciality minerals which experience a higher degree of price volatility.

Pre-tax NPV of A$103m for Hayes Creek

Applying an 8% discount rate, we obtain a pre-tax NPV of A$103m (A$67m post tax).

The difference with the PNX NPV as quoted in the PFS is due to our different commodity price and FX assumptions. Adopting 35% of this NPV due to project stage and funding risks, we obtain a current project valuation of A$24.9m (post-tax) and company valuation of A$0.034/share. A summary of our valuation of PNX is shown below:

Unrisked valuation of A$0.096 share, A$0.034/share risked

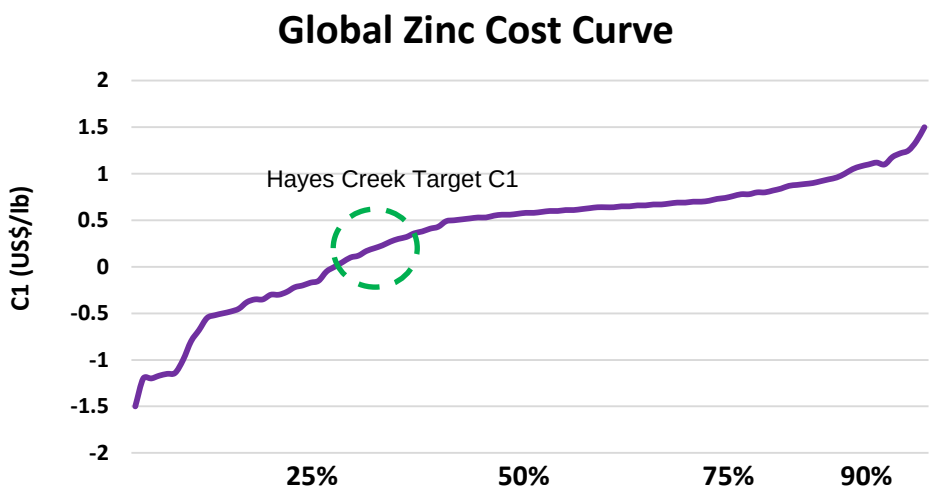
NAV by parts

	Un Risked		Risked	
	A$m	Per Share	A$m	Per Share
Hayes Creek	$ 71.10	$ 0.096	$ 24.88	$ 0.034
Corporate	$ (6.00)	$ (0.008)	$ (2.10)	$ (0.003)
Debt	$ (1.20)	$ (0.002)	$ (1.20)	$ (0.002)
Exploration Potential	$ 6.00	$ 0.008	$ 2.10	$ 0.003
Cash	$ 1.44	$ 0.002	$ 1.44	$ 0.002
Total	**$ 71.34**	**$ 0.096**	**$ 25.13**	**$ 0.034**

We note our allowance for exploration value is off-set by corporate costs, hence we do not attribute any value to additional potential for JORC resources. Should potentially economic resources be delineated in close proximity to Hayes Creek, then this has potential to increase our valuation. We note the presence of historic resources, hence believe there is good potential to further enhance the economics of the Hayes Creek project.

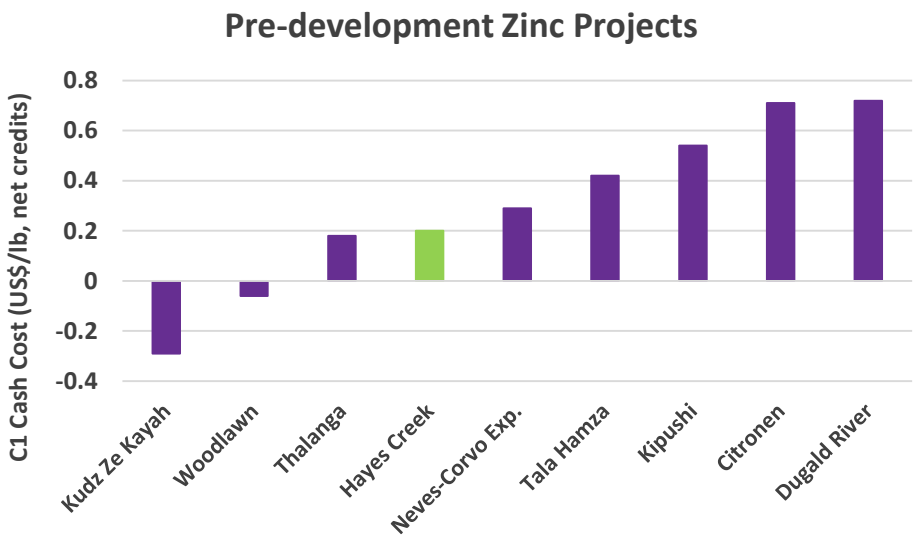
Project Benchmarking

Project appears well placed on the cost curve, and compared with other Zinc projects in development



Estimate only for 2H'CY'16, Includes by-product credits (Source: Pac Partners estimates).

Competitive global positioning



DFS and Project Funding

Debt and equity funding assumed for project development

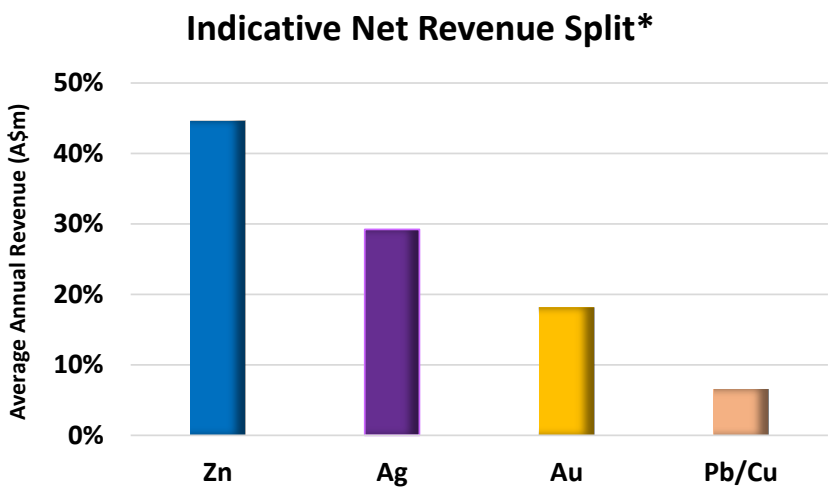
In June 2016, post completion of the Scoping Study, PNX announced it had raised A$1.6m through forward sale of silver metal relating to the future production from the Hayes Creek Project. Two identical agreement were executed for the forward sale of 112koz of silver, to be delivered at a rate of 56kozpa, for two years, once commissioning is complete (anticipated in 2019).

In addition, each agreement contains an option to increase this amount by 56koz (or one year) within 3 months of PFS completion (2Q'17) for a payment of a further A$0.4m. At the end of the two year period (or three year) each investor is entitled to a 0.24% (or 0.36% if option exercised) NSR in respect of gold and silver produced from Hayes Creek, paid for age period of five years from the end of the silver delivery period. Refer to PNX announcement for more details.

The company will require further funding to complete the DFS of approximately $6m We believe a combination of equity funding and other sources may be appropriate, however we have assumed A$4.5m in equity funding in FY'18E and a further A$10m in FY'19E to assist with project development funding. The balance of funding may be obtained from further forward sales, prepayments or other opportunities.

We allow for A$40m in project debt, made up of A$20m in a project loan and A$20m in forward sales for gold and silver. For simplicity, in our modelling we have assumed a A$40m loan at an interest rate of 12%pa. Our model generates free cashflow of >A$60m in the first two years, which is sufficient to repay debt and provide working capital, hence further refinement is not needed at this point.

Net Project Revenue Sources



Source: PAC Partners estimates

Board and Management

PNX has a long-term, stable Board and Management, with extensive mining experience.

MD James Fox has worked globally across mine development, mining operations for his 23yr industry career, and has been with the company since 2012. James was processing manager at Nifty Copper in WA and was responsible for development and operation of the Murrin Murrin laterite mine in WA.

James was responsible for leading the acquisition of the Hayes Creek project from Newmarket Gold in 2014.

Board and Management have extensive mine development and operational experience

Chairman Graham Ascough has been with PNX since 2012. A geophysicist by training, Graham has held management positions across many mining and exploration companies and is currently Chairman of Musgrave Minerals (ASX: MGV), Mithril Resources (ASX: MTH) and Avalon Minerals (ASX: AVI).

Non-executive directors include Paul Dowd (since 2007), Peter Watson (since 2007), and David Hillier (since 2010). Paul was previously MD of PNX until James' appointment in 2012, and was MD of Newmont Australia Ltd, and previously chairman of the SA Mineral Resources and Heavy Engineering Skills Centre. Paul has been a Non-Exec director of Oz Minerals (ASX: OZL) since 2009 and ERA since 2015.

Peter Watson was previously Group Legal Counsel at Normandy Mining Ltd prior to the takeover by Newmont. David Hillier is an accountant, who held a range of roles at Normandy Mining, including CFO for 3 years. He has held a number of public directorships over the years.

Risks

The normal risks apply as for all mine development companies

Commodity Prices and Currency Risks: Every mining company who does not have fixed price offtake agreements is exposed to movements in commodity and currency prices

Capital Risk: There is potential for the capital needs of the project to be in excess of that the company is able to obtain, thus potentially delaying the project or making it more difficult to develop. Normal financial markets risk applies, with such investment in the higher risk category (speculative).

Mine Development Risk: Typical risks include changes to development costs, timeframes, capital, mine design, processing and mining risks

Sovereign Risks: Australia, and the Northern Territory, whilst considered a relatively low risk destination, does from time to time attempt to introduce new taxes, royalties and other imposts on mining companies which may render the project unviable or uneconomic.

Geological & Mineralogy Risks: Risks remain on the geology and metallurgy as with all VMS orebodies where different ore deposits and metals are to be recovered.

Capital Structure

A summary of the current capital structure of PNX Metals is shown below:

Total No. Shares on Issue (M)	741
No. options (M)	0
Loans/Convertible Notes (face value, A$m, June 30)	1.2
Cash Balance (30 June 2017, Est) (A$m)	1.44
Share Price (date of publication)	1.3c
Enterprise Value (A$m)	A$9.4m

COMPANY SUMMARY

PNX Metals

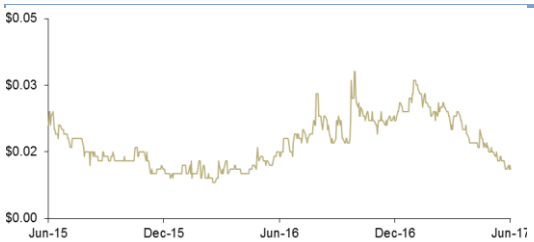
PNX.AX

24/07/17

Price Information

Price ($/Share)	$0.013	Target Price ($/Share)	$0.03
Mkt Cap ($m)	$9.6		
Enterprise Val. ($m)	$9.4		

Share Price & Volume Chart



Commodity / FX forecasts

	FY'20E	FY'21E	FY'22E	FY'23E
Silver (US$/oz)	16.5	16.5	16.5	16.5
Ex Rate (AUD:USD)	0.76	0.76	0.76	0.76
Prod. (Moz Silver)	1.7	1.6	1.0	1.4
Prod. (Koz Au)	16	10	14	15
Production (Kt Zn)	14	23	15	19
Prod. (Kt Pb/Cu)	5	4	2	3

Business Summary

PNX Metals (ASX: PNX) has completed a pre-feasibiity study into the Hayes Creek VMS deposit in the Northern Territory. The PFS showed a robust Zinc-Silver-Gold project with a pre-tax NPV of A$133m and capital cost of A$58m for the 450ktpa plant. Under an arrangement entered into in 2014, the company is also earning up to 90% of surround exploration ground prospective for gold and base metals. The Hayes Creek deposits are located in close proximity to Darwin (140km) and well situated with respect to infrastructure including roads, rail, power and water.

NAV by parts

	Un Risked		Risked	
	A$m	Per Share	A$m	Per Share
Hayes Creek	$ 71.10	$ 0.096	$ 24.88	$ 0.034
Corporate	$ (6.00)	$ (0.008)	$ (2.10)	$ (0.003)
Debt	$ (1.20)	$ (0.002)	$ (1.20)	$ (0.002)
Exploration Potential	$ 6.00	$ 0.008	$ 2.10	$ 0.003
Cash	$ 1.44	$ 0.002	$ 1.44	$ 0.002
Total	**$ 71.34**	**$ 0.096**	**$ 25.13**	**$ 0.034**

FINANCIAL SUMMARY

Year End - Jun	FY'18E	FY'19E	FY'20E	FY'21E	FY'22E	FY'23E
KEY METRICS						
EPS Growth (%)	-	-	-	36.1%	-733.3%	68.7%
PER (x)	-	-	0.5	0.3	2.6	0.8
Dividend Yield (%)	-	-	-	-	-	-
EV/EBITDA (x)	-	-	0	(1)	(3)	(1)
EV ($m)	13	52	19	(46)	(59)	(48)
ROE (%)	-	-	69%	53%	5%	17%
ROA (%)	-	-	38%	44%	5%	17%
ROIC (%)	-	-	58%	91%	11%	35%
PROFIT & LOSS (AUD $m)						
Revenue	-	-	115	124	84	107
EBITDA	-	-	52	69	20	34
Depreciation & Amortisation	-	-	(13)	(13)	(13)	(13)
EBIT	-	-	66	83	33	47
Net Interest Expense	-	(4)	(5)	(2)	-	-
Income Tax Expense	-	-	(10)	(16)	(2)	(6)
NPAT Reported	-	(4)	51	64	31	41
NPAT Adjusted	-	(4)	51	64	31	41
PER SHARE DATA (cps)						
Shares on Issue (m)	966	1299	1299	1299	1299	1299
EPS Reported	-0.1	0.0	2.6	4.1	0.5	1.6
EPS Adjusted	-0.1	0.0	2.6	4.1	0.5	1.6
DPS	0.0	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET (AUD $m)						
Cash	1	5	38	63	76	65
Debtors & Inventory	-	10	20	25	25	25
PP&E	10	53	53	42	36	21
Intangibles	0	0	0	0	0	0
Total Assets	12	68	112	130	137	111
Borrowings	2	40	40	-	-	-
Creditors	0	0	0	0	0	0
Total Liabilities	2	40	40	0	0	0
Net Assets	10	27	72	130	136	110
BALANCE SHEETS RATIOS						
Gearing - Debt/Equity (%)	0.0	1.3	0.0	-0.5	-0.6	-0.6
Interest Cover (x)	0.0	0.0	16.3	NA	NA	0.0
NTA per Share (cps)	1.0	2.1	5.5	10.0	10.5	8.5
CASH FLOW (AUD $m)						
EBITDA	-	-	52	69	20	34
Interest & Tax	-	4	5	19	3	8
Working Capital Change						
Operating Cash Flow	(1)	(4)	50	69	22	36
Maintenance Capex	-	0	-	-	-	7
Free Cash Flow	(1)	(4)	50	69	22	29
Expansion Capex	-	(42)	(14)	-	(7)	-
Equity Issues / (Buy Backs)	5	10	-	-	-	-
Proceeds from Borrowings	-	40	-	-	-	-
Other	-	-	-	-	-	-
Net Cash Flow	**4**	**88**	**64**	**69**	**29**	**29**

Resource Reserve Statement

	Tonnes (Mt)	Ag (g/t)	Au (g/t)	Zn (%)	Pb (%)
Resources (Indicated)					
Mt Bonnie	1.38	128	1.41	3.96%	1.15%
Iron Blow	2.08	143	2.19	5.49%	0.91%
Resources (Inferred)					
Mt Bonnie	0.17	118	0.80	2.11%	0.87%
Iron Blow	0.45	27	1.71	1.11%	0.18%
Total Resources	**4.08**	**124**	**1.81**	**4.4%**	**0.9%**

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Investment View

PAC Partners Investment View is based on an absolute 1-year total return equal to capital appreciation plus yield.

A Speculative recommendation is when a company has limited experience from which to derive a fundamental investment view.

Buy	Hold	Sell
>20%	20% – 5%	<5%

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