

## ASX Announcement

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# Hayes Creek zinc-gold-silver Project Update, NT

- **Hayes Creek DFS drill program successfully completed**
- **New mineralisation intersected at Mt Bonnie outside of the existing mineral resource demonstrates scope to increase the scale of Hayes Creek**
- **Assays due early 2018 and a Resource estimate to be updated shortly thereafter**
- **Exploration drilling at Moline deferred until after the wet season in Q1 2018**

PNX Metals Limited (**ASX: PNX**) is pleased to provide an update in respect of its recent program of Reverse Circulation (RC), aircore and diamond drilling at the high-grade Hayes Creek zinc-gold-silver Project<sup>1</sup>. The drill program was designed to provide geotechnical, resource, hydrological, and metallurgical information to inform the engineering and environmental studies. Extensional drilling at Mt Bonnie has intersected zinc mineralisation in a number of drillholes outside the existing Mineral Resource with assays pending.

### Managing Director Comment

PNX Managing Director James Fox said *“The Hayes Creek DFS drill program has been a great success, particularly in terms of identifying potential to increase feed to the proposed Process Plant from Mt Bonnie. The intersection of massive sulphides below the existing pit design and outside of the existing resource area bodes well for providing incremental growth to the initial 6.5yr mine life modelled for the Hayes Creek Project, and is expected to have a positive flow through effect on the already strong project economics.*

*We look forward to receiving the assays from this program which are due early in the New Year and to recommencing our exciting exploration in 2018 where we will look to test high priority targets in close proximity to the Hayes Creek Project.*

*A significant amount of technical work will now be undertaken over the wet season to inform the Project Definitive Feasibility and Environmental Impact Statement.”*

### Mt Bonnie drilling (Hayes Creek Project)

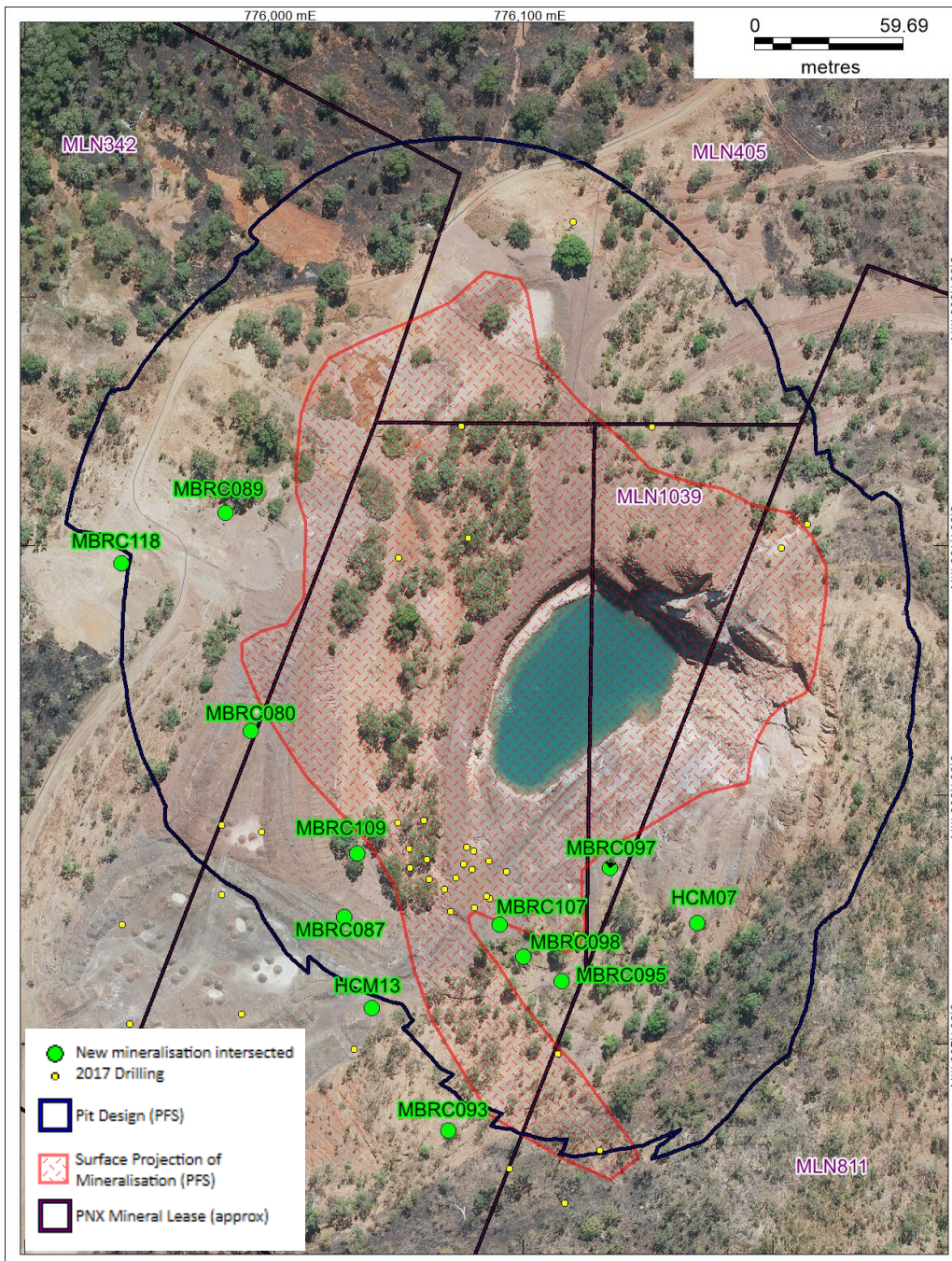
Drilling at the Mt Bonnie VMS deposit included 19 grade control holes to provide certainty for early production schedules and 14 exploration holes aimed at testing for mineralised extensions to the south and at depth. This program has delivered great success, with new mineralisation intersected in at least 10 of the exploration holes drilled with several containing zones of zinc (sphalerite) rich massive sulphide mineralisation located beneath the existing pit design and outside of the current resource boundary.

<sup>1</sup> See section 'About PNX's Projects' for further details on Hayes Creek

Assays are expected to be returned in the New Year, with an updated resource estimate to follow shortly thereafter. The significance of these results is that they may:

- extend the pit design further south and at depth providing an increase in the feed to the proposed process plant, and
- reduce the open-pit strip ratio by identifying mineralisation in what was previously assumed to be waste rock

These updates would have positive impacts on the already strong economics of the Project.



**Figure 1: Mt Bonnie showing drill holes where new mineralisation was intersected**

In total 66 RC and aircore (3,326 metres) and 9 diamond (737 metres) holes were completed (Table 1) which also included:



- 11 hydrogeological monitoring wells and 2 test wells (Mt Bonnie), 6 hydrogeological holes (Iron Blow) for environmental groundwater monitoring and modelling of pit water inflows to provide key input to environmental studies and mine design;
- 6 RC holes for sterilisation purposes into the nominated waste dump sites to the west and south of the proposed open pit at Mt Bonnie with nothing of note intersected as predicted;
- the remainder of the RC program was to provide environmental data on the geochemistry of the existing waste dumps, tailings and proposed pit waste material; and
- 9 diamond drill holes to provide geotechnical information with the engineer on site assessing the core. Once this assessment is completed the core from these holes will be assayed and used for metallurgical testwork to further support the integrity of the DFS.

**Table 1** Drill program hole location and status

Hole ID	Type	Purpose	East MGA	North MGA	RL	Dip	Azi MGA	Total Depth	Assays
HCT01	RC	Hydro	776001	8501784	119	-90	-	25	not assayed
HCT02B	RC	Hydro	776032	8501210	139	-90	-	79	not assayed
HCM05	RC	Hydro	775847	8501538	119	-90	-	18	not assayed
HCM06	RC	Hydro	776375	8501392	131	-90	-	36	not assayed
HCM07	RC	Hydro	776169	8501251	166	-90	-	58	Assays Awaited
HCM08	RC	Hydro	776349	8501117	146	-90	-	30	not assayed
HCM09	RC	Hydro	776164	8500938	156	-90	-	49	not assayed
HCM10	RC	Hydro	775889	8500629	143	-90	-	42	not assayed
HCM11	RC	Hydro	776361	8500481	156	-90	-	42	not assayed
HCM12	RC	Hydro	776012	8501795	119	-90	-	25	not assayed
HCM13	RC	Hydro	776036	8501216	139	-90	-	67	Assays Awaited
HCM14	RC	Hydro	776149	8501449	139	-90	-	72	not assayed
HCM15	RC	Hydro	775937	8501094	137	-90	-	55	not assayed
HCM16	RC	Hydro	776152	8504691	116	-90	-	100	not assayed
HCM17	RC	Hydro	776244	8504509	112	-90	-	120	not assayed
HCM18	RC	Hydro	776117	8504288	114	-90	-	24	not assayed
HCM19	RC	Hydro	776132	8504417	113	-90	-	100	not assayed
HCM20	RC	Hydro	776036	8504545	115	-90	-	114	not assayed
HCM21	RC	Hydro	776146	8504508	112	-90	-	100	not assayed
MBDH064	DD	Geotech	776120	8501530	122	-60	205	95	to be assayed after geotech inspection
MBDH065	DD	Geotech	776075	8501448	122	-60	25	110	to be assayed after geotech inspection
MBDH066	DD	Geotech	776050	8501395	123	-60	122	115	to be assayed after geotech inspection
MBDH067	DD	Geotech	776078	8501403	129	-70	218	100	to be assayed after geotech inspection
MBDH068	DD	Geotech	776204	8501399	159	-60	214	32	to be assayed after geotech inspection
MBDH069	DD	Geotech	775995	8501285	141	-60	32	105	to be assayed after geotech inspection
MBDH070	DD	Geotech	776080	8501270	135	-60	122	60	to be assayed after geotech inspection
MBDH071	DD	Geotech	776050	8501289	129	-60	122	75	to be assayed after geotech inspection
MBDH072	DD	Geotech	776122	8501244	146	-60	122	45	to be assayed after geotech inspection
MBRC073	RC	Sterilisation	775832	8501344	120	-60	122	102	not assayed
MBRC074	RC	Sterilisation	775780	8501160	126	-60	122	94	not assayed
MBRC075	RC	Waste Dump	775939	8501248	140	-90	-	19	Assays Awaited

MBRC076	RC	Waste Dump	775942	8501208	140	-90	-	19	Assays Awaited
MBRC077	RC	Waste Dump	775987	8501212	140	-90	-	19	Assays Awaited
MBRC078	RC	Waste Dump	775979	8501260	141	-90	-	73	Assays Awaited
MBRC079	RC	Waste Dump	775979	8501288	141	-90	-	19	Assays Awaited
MBRC080	RC	Waste Dump	775991	8501326	140	-80	122	133	Assays Awaited
MBRC081	RC	Tailings Dam	775967	8500784	140	-90	-	20	not assayed
MBRC082	RC	Tailings Dam	775994	8500730	140	-90	-	60	not assayed
MBRC083	RC	Sterilisation	775750	8500890	138	-60	122	66	not assayed
MBRC084	RC	Sterilisation	776230	8500790	143	-60	122	66	not assayed
MBRC085	RC	Sterilisation	776240	8500930	150	-60	122	66	not assayed
MBRC086	RC	Sterilisation	776400	8500845	152	-60	122	72	not assayed
MBRC087	RC	Waste Dump	776028	8501251	138	-90	-	91	Assays Awaited
MBRC088	RC	Waste Dump	776029	8501244	138	-60	120	48	Assays Awaited
MBRC089	RC	Exploration	775980	8501413	122	-60	122	129	Assays Awaited
MBRC090	RC	Exploration	776117	8501136	175	-90	-	30	not assayed
MBRC091	RC	Exploration	776131	8501157	174	-90	-	42	Assays Awaited
MBRC092	RC	Exploration	776094	8501150	165	-90	-	36	not assayed
MBRC093	RC	Exploration	776070	8501165	155	-90	-	48	Assays Awaited
MBRC094	RC	Res Def	776114	8501196	157	-90	-	36	Assays Awaited
MBRC095	RC	Exploration	776116	8501225	145	-60	122	40	Assays Awaited
MBRC096	RC	GradeControl	776102	8501256	143	-60	122	48	Assays Awaited
MBRC097	RC	Exploration	776135	8501271	149	-60	122	40	Assays Awaited
MBRC098	RC	Exploration	776100	8501235	139	-60	122	42	not assayed
MBRC099	RC	GradeControl	776076	8501272	135	-90	-	19	Assays Awaited
MBRC100	RC	GradeControl	776073	8501267	135	-90	-	18	Assays Awaited
MBRC101	RC	GradeControl	776085	8501259	137	-90	-	13	Assays Awaited
MBRC102	RC	GradeControl	776087	8501258	137	-60	122	12	Assays Awaited
MBRC103	RC	GradeControl	776093	8501269	136	-60	122	14	Assays Awaited
MBRC104	RC	GradeControl	776086	8501274	135	-60	122	17	Assays Awaited
MBRC105	RC	GradeControl	776080	8501277	135	-60	122	19	Assays Awaited
MBRC106	RC	GradeControl	776077	8501279	135	-90	122	22	Assays Awaited
MBRC107	RC	Exploration	776091	8501248	140	-90	-	49	Assays Awaited
MBRC108	RC	GradeControl	776080	8501255	137	-90	-	13	Assays Awaited
MBRC109	RC	Exploration	776033	8501277	129	-90	-	90	Assays Awaited
MBRC110	RC	GradeControl	776068	8501262	133	-60	122	16	Assays Awaited
MBRC111	RC	GradeControl	776062	8501266	131	-60	122	60	Assays Awaited
MBRC112	RC	Res Def	776054	8501271	131	-60	122	19	Assays Awaited
MBRC113	RC	Res Def	776071	8501253	135	-60	122	55	Assays Awaited
MBRC114	RC	GradeControl	776061	8501274	131	-60	122	19	Assays Awaited
MBRC115	RC	GradeControl	776054	8501279	130	-60	122	25	Assays Awaited
MBRC116	RC	GradeControl	776060	8501290	132	-60	122	28	Assays Awaited
MBRC117	RC	Exploration	776214	8501409	159	-90	-	65	not assayed
MBRC118	RC	Exploration	775939	8501393	121	-60	122	127	Assays Awaited
MBAC119	AC	Tailings Dam	775983	8500769	140	-90	-	12	not assayed

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## Moline Exploration

Due to a combination of equipment breakdown and wet season rains making some areas impassable, the planned scout RC drill program at the Moline Project was not completed. The Moline Project (MLN1059 and ML24173) is located approximately 65km to the east of Hayes Creek in the Pine Creek region of the Northern Territory (Figure 2). The proposed drill targets were recently identified by their strong zinc/gold in soils geochemical signatures and subsequently refined through ground Induced Polarisation (IP) geophysical surveys.

PNX is well funded to accelerate its exploration activities in this under-explored and highly prospective region of the Northern Territory. The Company looks forward to providing an update in the New Year as to the timing of recommencing exploration drilling at these priority targets at Moline, as well as the results from modelling of Airborne EM and magnetic datasets around the Hayes Creek Project<sup>2</sup>.

The aim of current exploration is to discover and delineate additional high-value base metals and/or gold deposits to provide a pipeline of growth opportunities to complement the proposed development at Hayes Creek or other existing free gold milling infrastructure in the region.

## About PNX's Projects

PNX recently completed a PFS<sup>3</sup> over the Hayes Creek Project which confirmed the Project to be a promising future low-cost, high-margin zinc and precious metals mine that could create significant value for the Company's shareholders.

The PFS was based on the development of the high-grade Iron Blow and Mt Bonnie zinc-gold-silver VMS deposits which are located less than 3km apart on wholly owned Mineral Leases within the Pine Creek region of the Northern Territory, 170km south of Darwin (Figure 1).

The PFS forecasts the Project to generate an NPV<sub>10</sub> of A\$133 million, based on net smelter revenue from the sale of zinc and precious metals concentrates of A\$628 million (based on consensus views as to future metals prices and exchange rates) over a 6.5 year mine life through annual production of 18,200t zinc, 14,700oz gold, and 1.4Moz silver (39,100t of zinc equivalent). With a low A\$58 million initial capital expenditure requirement, the Project is forecast to have a 73% IRR, and very short pay-back period of 15 months.

The Project is located in a favourable mining jurisdiction where the development scenario considers and utilises existing infrastructure that includes rail, road, high voltage power lines and water, further enhancing Project fundamentals and lowering development risks.

It is envisaged that the Project can be ready for development in 2020 and will directly employ 130 personnel.

The Definitive Feasibility Study (DFS) is progressing well and expected to be completed in 2018. The DFS is expected to provide increased confidence in all aspects of the Project as well as investigate opportunities to improve overall Project economics. GR Engineering Services Limited (GRES) was recently appointed as Study Manager for the DFS<sup>4</sup>.

The Moline, Burnside and Chessman project areas form part of PNX's farm-in agreement with Kirkland Lake Gold Ltd. PNX currently holds a 51% interest (excluding uranium) in these areas, which consists of 19 Exploration Licences and 4 Mineral Leases covering approximately 1,700km<sup>2</sup> in the Pine Creek region of the Northern Territory (Figure 2).

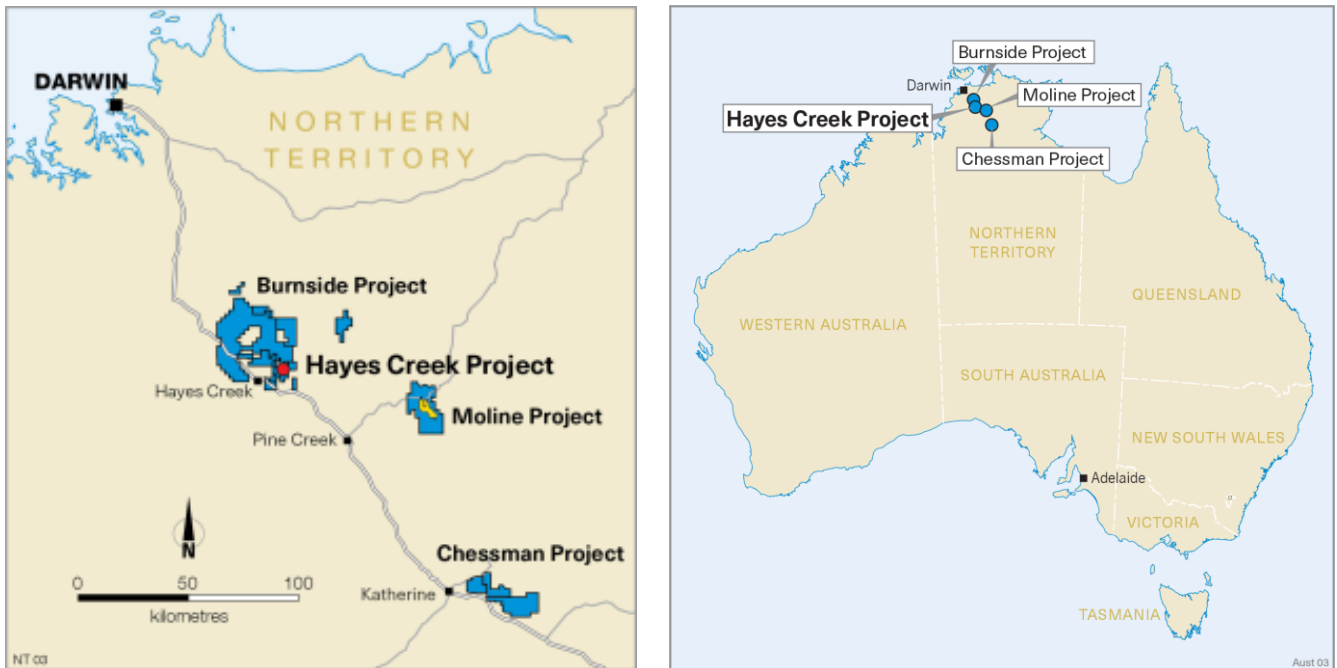
PNX is now in the second stage of the farm-in, where it can increase its interest in each of the tenements to 90% (excluding uranium) with expenditure of \$2 million by 15 December 2018, with approximately \$1.5 million of that having been spent to date.

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<sup>2</sup> Refer ASX announcement 15 June 2017

<sup>3</sup> Refer ASX announcement 12 July 2017

<sup>4</sup> Refer ASX announcement 1 December 2017



**Figure 2: NT Project locations**

**Competent Person’s Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Andrew Bennett, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Bennett has sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Bennett is a full time employee of PNX Metals Ltd and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

For further information please visit the Company’s website [www.pnxmetals.com.au](http://www.pnxmetals.com.au) or contact us:

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# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are derived from HQ or PQ diamond core samples cut in ½ or ¼ for sampling purposes, and reverse circulation (RC) chips which are cone-split for sampling</li> <li>All core and chips have been geologically logged by the onsite geologist</li> <li>Sampling interval match geological boundaries for core and are at 1m intervals for RC chips</li> <li>Sample weights were typically 2-3 kg</li> <li>Magnetic susceptibility measurements were taken using KT-10 meter</li> <li>Field portable XRF measurements taken for 34 elements (Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Rb, Sr, Zr, Mo, Ag, Cd, Sn, Sb, W, Hg, Pb, Bi, Th, U, Pd, S, Ba, K, Cs, Sc, Se, Te, and Au) using an Niton XL3T 950 device</li> <li>Mineralised intercepts have been verified using the field portable XRF instrument which gives a qualitative measure of the relevant elemental abundances</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>All RC drilling was from surface with 5.25" bit with a face sampling hammer. Drilling was carried out by Geo Drilling Pty Ltd, Northern Territory using a truck mounted Schramm 450 drilling rig</li> <li>All diamond drilling was carried out by WDA Drilling Services Pty Ltd, using an Alton HD900 drilling rig</li> <li>Camteq Proshot and Globaltech Pathfinder multi-shot survey tools were used at regular intervals (approximately every 30m downhole) as instructed by PNX's on-site geologist to monitor the downhole position</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential</li> </ul>	<ul style="list-style-type: none"> <li>Core recovery was measured for each core run (typically 3 to 6 m), with core recoveries averaging about 98%.</li> <li>Sample recovery was estimated visually by inspecting the size of the sample collected, and recorded in the geological log at 1m intervals. Recovery of the tailings dam clays was poor, but will have no impact on mineral resource estimates</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>loss/gain of fine/coarse material.</i></p>	<ul style="list-style-type: none"> <li>No relationship has yet been established between sample recovery and grade. The vast majority of RC samples were dry, but when samples became wet, there was unavoidable loss of fines (typically 5-10% of the sample weight). This has the possibility of introducing a sample bias. Geological logs include the wet or dry nature of the sample</li> </ul>
Logging	<ul style="list-style-type: none"> <li><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>All core has been geologically and geotechnically logged by the onsite geologist,</li> <li>RQD was measured for each metre</li> <li>All core has been photographed prior to cutting for assay</li> <li>Intervals with like geological characteristics are logged in detail, with sample boundaries corresponding to changes in geology</li> <li>All RC chips have been geologically logged by the onsite geologist at 1m intervals and chip trays have been retained and photographed</li> <li>Log fields include lithology, colour, grainsize, texture, veining, sulphide mineralisation, alteration, strength, recovery and sample moisture</li> <li>Logs have been aided by the use of magnetic susceptibility and portable XRF measurements on each metre sample</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p><b>CORE:</b></p> <ul style="list-style-type: none"> <li>All core was cleaned and metre intervals marked up prior to cutting and sampling</li> <li>All core samples to be submitted for assay comprised sawn quarter or half core samples</li> <li>After cutting the half or three quarter core remaining in the trays contains the orientation and metre marks</li> <li>Samples of all mineralised intercepts and their surrounding ~10m are submitted for assay. Intervals submitted for assay are based on visual and portable XRF readings</li> <li>Cone splitting at the drill rig provides about a 1/8<sup>th</sup> fraction of the total drilled portion for assay</li> </ul> <p><b>RC CHIPS:</b></p> <ul style="list-style-type: none"> <li>All samples were cone split. The splitter was blown with compressor air and cleaned at the end of each rod (6m) to reduce sample contamination</li> <li>All mineralised intercepts and their surrounding ~10m are submitted for assay. Intervals submitted for assay are based on visual and</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>portable XRF readings</p> <ul style="list-style-type: none"> <li>• Duplicate field samples were taken each 25<sup>th</sup> sample by using a dual outlet on the cone splitter to check representivity of sample</li> <li>• Individual samples are placed in individual sample bags and clearly identified prior to submission to the laboratory for assay</li> <li>• The sample sizes are appropriate for the grain size of the material being sampled</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were submitted to Northern Australian Laboratories (NAL) in Pine Creek, Northern Territory</li> <li>• After crushing and pulverizing to – 100 microns, each sample is roll mixed on a rubber mat after pulverizing, a barren flush is pulverized between each sample, the samples are subjected to a four acid digest (considered a total digest for the elements of interest) and read using ICP-MS and OES for a suite of elements (lab methods G400 and G340 for ore grade samples). A sub-sample of the pulverized sample is also submitted for conventional fire assay for gold (FA50).</li> <li>• Density determinations have been undertaken on core using the Archimedes method</li> <li>• PNX submitted certified reference materials and duplicates samples every 25<sup>th</sup> sample and also submitted blank quartz material to check laboratory analytical and sample preparation quality at a rate of 3 blanks per 100</li> <li>• NAL have internal QAQC procedures, including certified reference materials, duplicates and blanks, results of which are reviewed by NAL prior to reporting to PNX</li> <li>• Visual assessment of the standards, blanks and duplicates shows that a high degree of confidence can be placed in the accuracy and precision of the assay data</li> </ul>
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No twinned holes have been carried out. A statistical comparison between RC samples and diamond core will be undertaken during resource estimation</li> <li>• External laboratory assays are routinely carried out prior to resource estimation. No bias has been identified in any of the valuable elements to date</li> <li>• All logging has been carried out using standardised logging codes to professional standards. All geological, geotechnical and sampling information has been entered into a digital database which has been validated for sample overlaps and missing data</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>All hard copies of information are stored in a secure compound at site. Digital copies are held on site and at PNX's Adelaide office on a backed-up server</li> <li>No adjustments to assays have been made. Where gold assay data has been repeated by the lab, the average value has been reported in the significant intersection calculations.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Downhole surveys have been collected by at approximate 30m intervals downhole and manually adjusted where magnetic interference is encountered in pyrrhotite bearing mineralisation</li> <li>The drill collars were located using a Garmin GPS Map 60 hand-held GPS unit and verified using a second unit. The drill hole locations are considered accurate to within 5m and will be picked up with differential GPS prior to resource estimation. All coordinates are quoted using the GDA94 datum and projected to MGA zone 52</li> <li>Topography has been accurately measured using a drone survey over the area in 2014</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The drill spacing is irregular, due to the irregular topography and historical mining activities; however the overall drill spacing within the mineralised zone is approximately 15 x 20m, with the current program including a small close-spaced grade control pattern at about 6 x 6m,</li> <li>The sample spacing is sufficient to establish the grade continuity. Cored sample intervals are determined from geological contacts and then at metre intervals within a particular unit. Where isolated samples are less than one metre in width they have been cut to geological boundaries. RC samples are collected at routine 1 metre downhole intervals, which is appropriate for RC drilling and for the thickness of the known mineralisation</li> <li>No sample compositing has been carried out in ore zones. In waste zones, up to 5m composite have been sampled by spearing the original 1m sample. The waste composites will be used for waste rock characterisation studies and geological interpretation</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a</li> </ul>	<ul style="list-style-type: none"> <li>Most drill holes are oriented to intersect mineralisation close to perpendicular to the interpreted orientation of the main zone of mineralisation. The mineralisation may be folded in some areas, which could result in the possibility of drill holes being not optimally orientated. Some holes in the current program were deliberately</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>sampling bias, this should be assessed and reported if material.</i>	oriented oblique to mineralisation as their purpose was not for resource definition but for geotechnical and structural control <ul style="list-style-type: none"> <li>Any biasing effect is yet to be determined</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Logging, cutting and sampling has been carried out by PNX personnel who are always on site during drilling, and samples are submitted to the laboratory by the same people</li> <li>No third parties have been allowed access to the samples</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits have been carried out at this point</li> <li>A visual comparison of the assay results with the field portable XRF shows an acceptable correlation with lab results</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Iron Blow deposit is located within MLN214, MLN341, MLN343 and MLN349 which covers an area of some 51.07 hectares,</li> <li>The Mt Bonnie deposit is located within MLNs 1033, 1039, 342, 405 and 811, with surrounding tenure for infrastructure including MLNs 346, 459 and ML30589</li> <li>The deposits and drilling is situated within Perpetual Pastoral Lease 1217, NT Portion 07122 known as Douglas Station. PNX have an access agreement with the station owner</li> <li>The Mineral Leases are in good standing and no known impediments exist</li> <li>A 'Sale and Purchase Agreement and Heads of Agreement for Farm In and Joint Venture Agreement' (Agreement) between PNX and Newmarket Gold NT Holdings Pty Ltd (Newmarket) was signed on 15 August 2014 for the 100% acquisition by PNX of the mineral leases containing the Iron Blow and Mt Bonnie deposits. Newmarket retains a 2% royalty on any silver and gold production from those deposits</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration at Iron Blow has consisted of oxide mining, geological mapping, surface geochemical sampling and diamond drilling</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• GBS and Newmarket carried out limited drilling in 2007 and 2011 respectively. Cores for these holes have been inspected and relogged (thereby verified) by PNX for consistency</li> <li>• Extensive exploration on the broader tenement package by previous explorers has focused on gold exploration. Numerous base metal prospects have been identified in surface geochemical sampling by these explorers that have not been adequately followed up due to the lower gold values</li> <li>• Newmarket completed an airborne EM (VTEM) survey over parts of the tenement package. Numerous conductive rocks prospective for base metals have been identified by PNX for further ground truthing and follow-up work</li> </ul>
Geology	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Iron Blow and Mt Bonnie are stratabound base metal, silver and gold massive sulphide deposits. They are located within the Mount Bonnie Formation of the South Alligator Group, within the Pine Creek Orogen of the Northern Territory. Both deposits appear to be located at similar stratigraphic positions on opposite limbs of the roughly north-south trending Margaret Syncline</li> <li>• Mineralisation is hosted within carbonaceous siltstones and mudstones within the lower portion of the Mount Bonnie Formation. It appears to have formed early in the basin development and has associated footwall alteration consisting of variable proportions of chlorite, amphibole, calcite, silica, and talc with associated vein and disseminated sulphides. The mineralisation appears to be consistent with a volcanic hosted massive sulphide deposit (VHMS) characteristics, or could possibly be related to carbonate replacement style. Further work is required to determine the exact association.</li> <li>• The massive sulphide mineralisation is dominantly massive pyrrhotite with zones of coarse-grained, high-grade sphalerite, arsenopyrite, chalcopyrite, with lesser galena. Significant silver and gold grades are also present in previous drillholes within the massive sulphide and within adjacent quartz-veined and brecciated sediments containing significant disseminated and stringer sulphides, which is possibly the vent zone typical of VHMS deposits</li> <li>• Mineralisation at both Iron Blow and Mt Bonnie is structurally complex and appears to be deformed by the regional deformation events. Structural mapping and logging is continuing to determine the precise nature, timing, and geometry of the mineralised bodies</li> </ul>



Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:               <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to table and diagram in main announcement for drill summary details</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Reported results are interval length weighted</li> <li>• No high cut-off grades have been applied</li> <li>• Reported intersections are based on sharp grade boundaries and may include narrow intervals of sub-ore grade mineralisation which would be considered as internal dilution if mined by open pit methods</li> <li>• Reported intersections are reported as significant if they occur at a minimum of 0.7 g/t Au, calculated on an equivalence basis. This is consistent with the minimum cut-off grade reported in previous announcements. Mineralised intersections were observed to be coherent and have sharp grade boundaries, but may include narrow intervals of sub-ore grade mineralisation which would be considered as internal dilution if mined by open pit methods</li> <li>• Higher grade mineralised zones have been reported if coherent downhole intervals =&gt;6g/t Au (equivalent) is encountered</li> <li>• Metal equivalent grades assumptions are calculated using the following formula: <b>Au Eq g/t</b> = [(Au grade g/t x (Au price oz/31.1034768) x Au recovery) + (Ag g/t x (Ag price oz/31.1034768) x Ag recovery) + (Cu grade % x (Cu price per t/100) x Cu recovery) + (Pb grade % x (Pb price per t/100) x Pb recovery) + (Zn grade % x (Zn price per t/100) x Zn recovery)] / (Au price per oz/31.1034768) x Au recovery. <b>Zn Eq %</b> = [(Au grade g/t x (Au price oz/31.1034768) x Au recovery) + (Ag g/t x (Ag price oz/31.1034768) x Ag recovery) + (Cu grade % x (Cu price per t/100) x Cu recovery) + (Pb grade % x (Pb price per t/100) x Pb recovery) + (Zn grade % x (Zn price per t/100) x Zn recovery)] / (Zn price per t/100) x Zn recovery</li> <li>• Metal prices and recoveries for equivalent value calculations are</li> </ul>

Criteria	JORC Code explanation	Commentary
		detailed in the main body of the report
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• All significant intersections are quote as downhole widths</li> <li>• The core to bedding relationships suggest that the true widths of the massive sulphide zones are very close to true widths</li> <li>• The geometry of the mineralisation is approximately 45deg NW at Mt Bonnie and most of the drill holes have been drilled towards the SE perpendicular to the mineralisation</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to the main body of this announcement</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All matters of importance have been included</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All relevant information has been included</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Detailed geological interpretations will be completed following modelling of the drilling and incorporated with historical data and mapping results to estimate a mineral resource</li> <li>• PNX are undertaking DFS level studies (expected completion 2<sup>nd</sup> half 2018) looking at future project development</li> </ul>