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ASX Announcement
5 December 2016

High-grade Gold at Moline, NT

- **High-grade gold mineralisation intersected in PNX's first drill program at Moline (School Prospect) MORC002 intersected:**
  - **7m @ 11.9g/t Au from 115m down hole, including;**
    - **3m @ 23.7g/t from 116m**
- **These results represent the best known grades of gold mineralisation recorded at the School Prospect**
- **Historical intercepts including 2m @ 21.9 g/t Au from 52m, and 2m @ 18.6g/t from 89m recorded below the historical open pit**
- **Mineralisation remains open in all directions**
- **Total of 12 RC holes completed to test three known gold mineralised structures**
- **Gold assays received for 2 drill holes with the remaining holes due shortly**

PNX Metals Limited **(ASX: PNX)** is pleased to advise that it has intersected high-grade gold mineralisation in its first two holes drilled at the Moline Exploration Project (MLN1059), located less than 1.5km off the Kakadu Highway, and approximately 65km to the east of the Hayes Creek gold-silver-zinc project in the Pine Creek region of the Northern Territory (Figure 1 and 3).

A total of 12 RC (Reverse Circulation) holes were completed for 1,497 metres during November. The drill program was designed to test three mineralised structures that were partly mined for oxide mineralisation in the early 1990's. Drilling to test the Hercules prospect remains incomplete with only one hole drilled to the north due to wet weather, PNX looks forward to completing this program in 2017.

Results from the first two holes, being the deepest holes drilled to date (only approximately 50 metres below the historical open-pit) at the School Prospect have been received, with results from the remaining 10 holes at Moline and Tumbling Dice are due within the coming weeks.

Both holes intersected significant gold mineralisation beneath the historic School open-pit, including:

- **MORC001: 9m @ 2.66 g/t Au (from 68m) in the western lode**
- **MORC002: 7m @ 11.89 g/t Au (from 115m) in the eastern lode, including:**
  - **MORC002: 3m @ 23.79 g/t Au (from 116m)**

Mineralisation occurs in folded pyritic and veined sediments of the Mt Bonnie Formation (host to the Iron Blow and Mt Bonnie deposits (3.89mt @ 5.91g/t AuEq[1]) at the Hayes Creek project), with at least two main lodes observed, comprising a western and eastern lode.

[1] *See PNX ASX release 31 Mar 2016*

MORC002 intersected the eastern lode (Figure 2) and the best known grades of gold mineralisation recorded for the School Prospect. Mineralisation is open in all directions, providing significant scope for further exploration success.

In addition, base metals sulphides were observed in the rock chip samples and these assays are pending.

PNX Managing Director James Fox said: "We are very pleased to have completed our first exploration drill program at Moline with immediate success in identifying new high-grade gold mineralisation. We are attracted by the opportunity to quickly define sizeable and high-grade mineral resources by building on existing datasets at Moline. With base metal associations, identified in historic data, the Moline Project shows synergies with our Hayes Creek Project and we look forward to further investigating the untapped potential of this area."

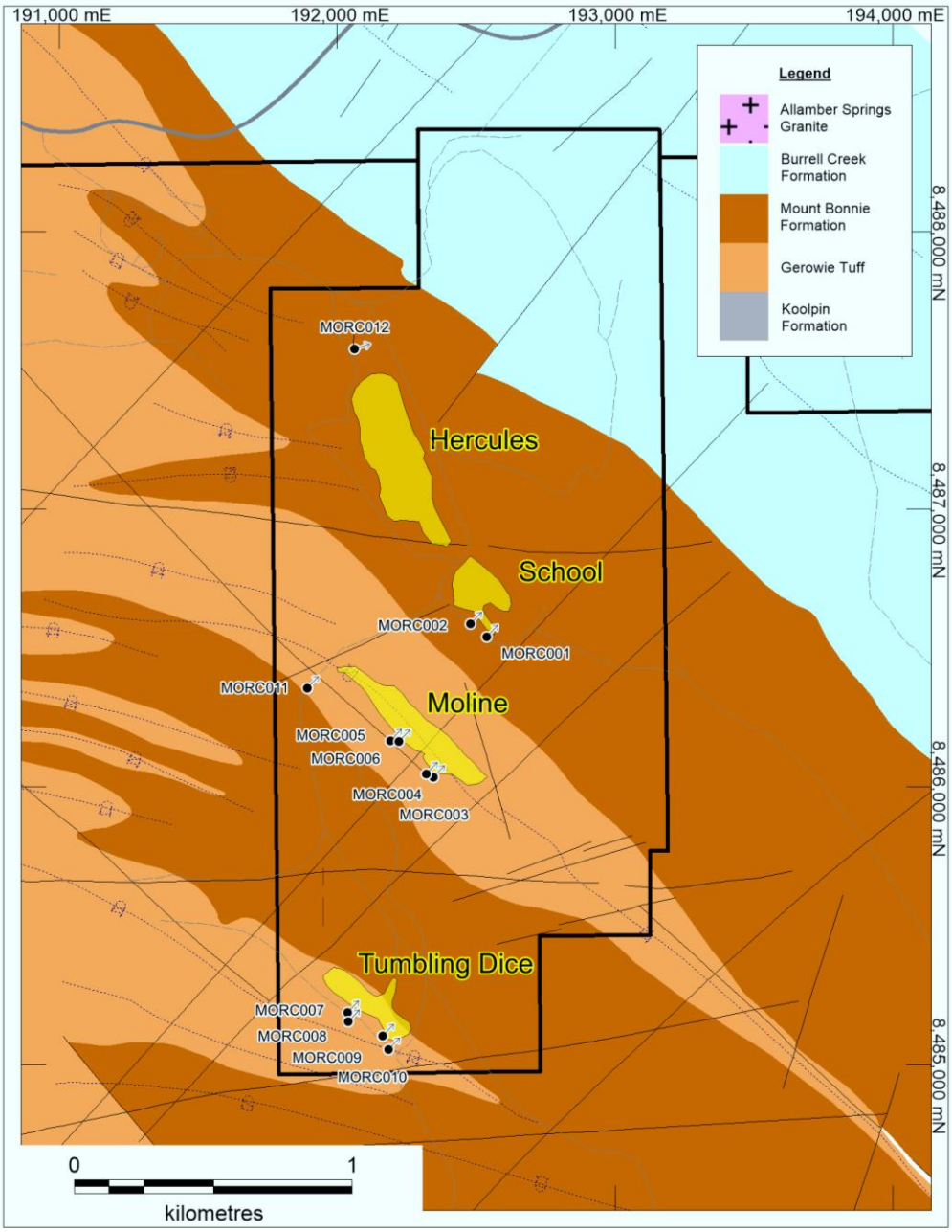

***Figure 1**: Moline location plan showing PNX drilling and historic open-pits*

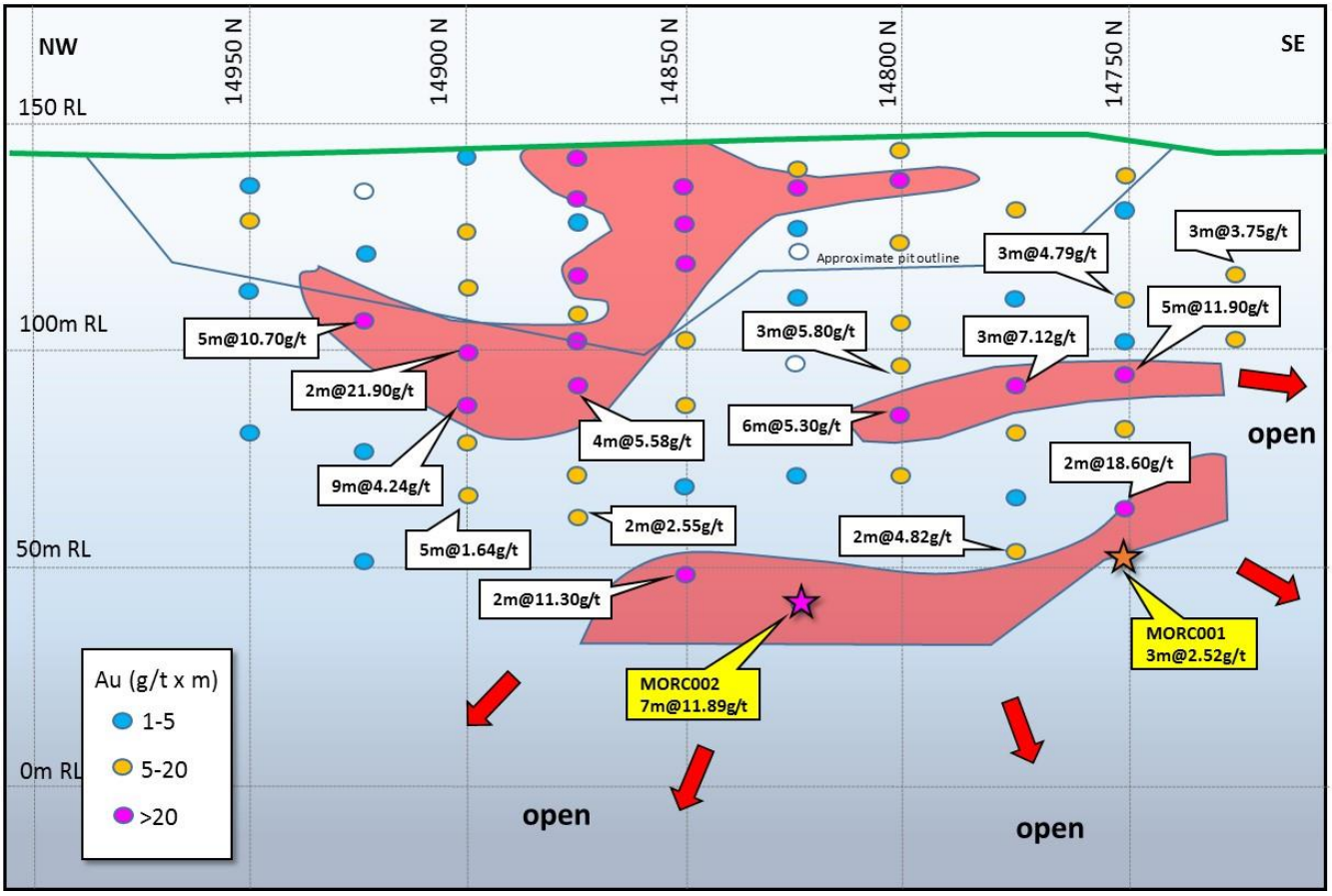

Figure 2: *School prospect eastern lode long-section showing grade boundaries (yellow = PNX holes, white = historic intercepts)*

Table 1 *– Drill hole assay summary Moline project*

Hole ID	East MGA	North MGA	Dip	Azi MGA	Total Depth		From	To	Int.	Au (g/t)
MORC001	192534	8486544	-60	42.9	121		68	77	9	2.66
						and	102	105	3	2.52
MORC002	192475	8486591	-60	42.9	145		69	70	1	0.95
						and	**115**	**122**	**7**	**11.89**
						incl	***116***	***119***	***3***	***23.79***
MORC003	192341	8486038	-60	42.9	136	Assays Pending				
MORC004	192315	8486050	-60	42.9	151	Assays Pending				
MORC005	192186	8486169	-60	42.9	135	Assays Pending				
MORC006	192218	8486166	-60	42.9	133	Assays Pending				
MORC007	192031	8485191	-60	42.9	100	Assays Pending				
MORC008	192034	8485158	-60	42.9	109	Assays Pending				
MORC009	192158	8485107	-60	42.9	127	Assays Pending				
MORC010	192180	8485058	-60	42.9	125	Assays Pending				
MORC011	191886	8486360	-60	42.9	115	Assays Pending				
MORC012	192055	8487579	-60	76.7	100	Assays Pending				

About the Moline Project

Gold had been mined periodically at Moline up until the early 1990s when mining ceased abruptly due to equipment failure. This was prior to depletion of mining inventory, and prior to evaluation of resource potential at depth.

Since then there has been no mining and very little exploration activity, however historical information and an airborne EM survey flown in 2011 *suggests significant near-surface mineralisation still exists beneath and along strike from existing historical workings*.

The historical mining activities are contained within a granted Mineral Lease which is surrounded by a large exploration tenure that PNX considers highly prospective.

The Moline Project is part of an earn-in agreement with Newmarket Gold NT Holdings Pty Ltd and expenditure contributes toward the completion of the Stage 1 exploration earn-in where PNX is earning up to 90 per cent, in two stages, in 19 Exploration Licenses and four Mineral Leases (see ASX release 18 August 2014 for further details of the agreement) covering approximately 1,700km^2 (Figure 3).

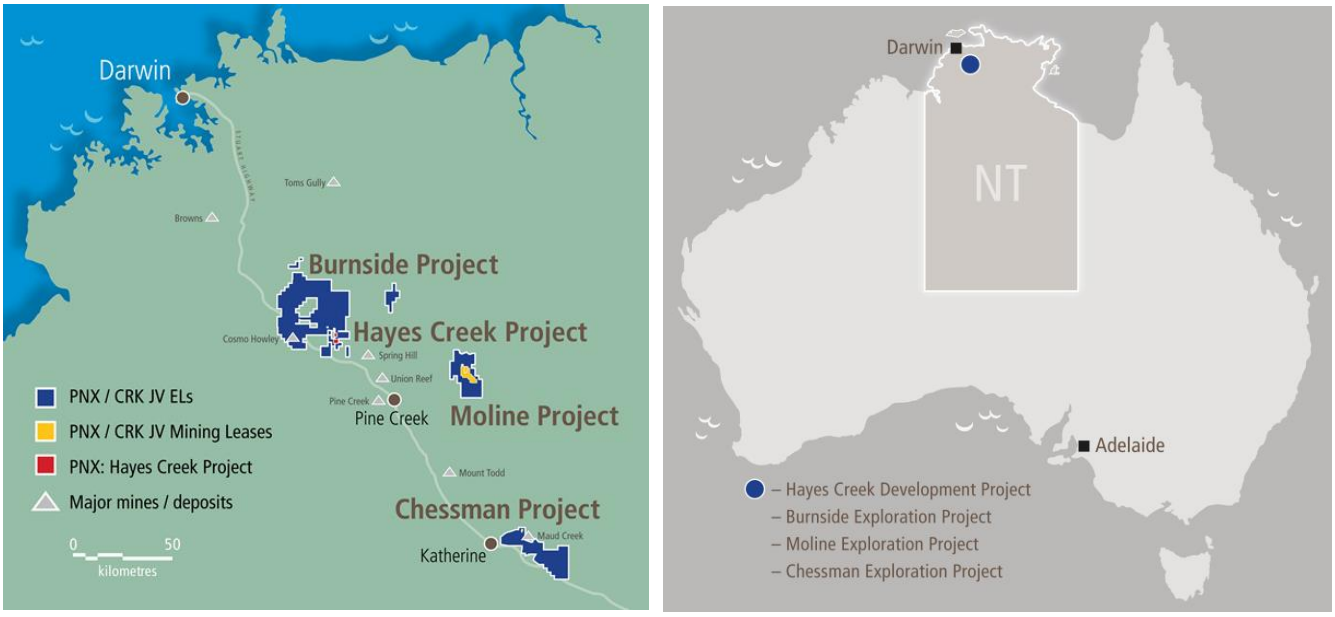

Figure 3: *NT Project locations*

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.

James Fox
Managing Director & CEO
Telephone: +61 (0) 8 8364 3188

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• All samples are RC chips • All samples were split using cone splitter mounted to the bottom of the cyclone to obtain a representative sample for analysis • Sample intervals were 1m in mineralised areas and composited to no more than 4m using a spear in non-mineralised areas • Sample weights were typically 2-3kg • Magnetic susceptibility measurements were taken using a portable KT-10 Magnetic Susceptibility Meter device • 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 500 device
Drilling techniques	• *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).*	• All drilling was RC drilling from surface with a 5.25" face sampling hammer. Drilling was carried out by Geo Drilling of Bachelor, Northern Territory
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Sample recovery was estimated visually by inspecting the size of the sample collected, and recording this in the geological log at 1m interval. Excellent recovery was obtained • The vast majority of samples were kept dry during RC drilling
Logging	• *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.*	• All RC chips have been geologically logged by the PNX onsite geologist at 1m intervals and chip trays have been retained and photographed • Log fields include lithology, colour, grainsize, texture, veining,

Criteria	JORC Code explanation	Commentary
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	sulphide mineralisation, alteration, strength, recovery and sample moisture • Logs have been aided by the use of magnetic susceptibility and portable XRF measurements on each metre sample
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All samples within the mineralised horizon were collected at one metre intervals into a pre-labelled calico bag mounted to the bottom of the cone splitter outlet. • Samples outside the mineralised horizon were collected at one metre intervals and a composite made up of to 4m by using a spear of each residue bag • Both 1m and composited samples were subject to routine duplication in the field at a rate of 1 duplicate for every 25 samples to test sampling representivity. No material sampling bias was observed • Individual samples are placed in individual sample bags and clearly identified prior to submission to the laboratory for assay • The sample sizes are appropriate for the grain size of the material being sampled
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• Samples were submitted to Northern Australian Laboratories (NAL) in Pine Creek, Northern Territory • 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. A sub-sample of the pulverized sample is submitted for conventional fire assay for gold (FA50) • NAL conducts internal standards and blanks results which are reviewed prior to reporting to PNX • Commercially obtained standard reference samples are also submitted at a ratio of 1 for every 25 samples with the assay samples as part of the sample number sequence • In addition to the laboratory standards, PNX inserted field duplicate samples at a ratio of 1 for every 25 samples. • Blank (zero value) samples are also included at a ratio of 3 for every 100 samples to check against contamination between samples in the laboratory • 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
Verification of	• *The verification of significant intersections by either independent or*	• No additional verification of historical data has been undertaken and

Criteria	JORC Code explanation	Commentary
sampling and assaying	*alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	no adjustments have been made • No holes have been twinned • All logging has been carried out using standardised logging codes to professional standards. All geological and sampling information has been entered into digital formats for validation • All hard copies of information are stored on site. Digital copies are held on site and at PNX Adelaide office on a backed-up server • No adjustments to assays have been made. Where gold assay data has been repeated by the lab (for all samples >1 g/t), the average value has been reported
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drillhole collar coordinates were obtained by standard GPS with nominal 5m accuracy and elevations have been estimated from the DTM available from detailed aerial geophysical surveys. Differential GPS pick-ups are planned • A GlobalTech Pathfinder single-shot survey tool was used by Geo Drilling at regular intervals (approximately every 30m downhole) as instructed by PNX's on-site geologist to monitor the downhole position.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Drilling undertaken by PNX was carried out at selected locations only, however historical data exists at typically 25m section spacing thoughout the areas previously mined. The new drilling occurs underneath the previous drilling (refer map in report). • The previous drilling was considered sufficient to define Mineral Resources and Ore Reserves in the early 1990's, however validation of this data has not been completed, and so any mention of tonnes and grade are considered "historical" at this stage. PNX intends to complete validation of the historical results so that the data can be used in future mineral resource estimates. • Compositing of samples has only been carried out outside of the mineralised horizons. No results reported relate to such composited intervals.
Orientation of data in relation to	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• Drilling was oriented toward approximately 043 MGA grid (039 magnetic) to intersect the mineralisation approximately perpendicular to its trend. Mineralisation appears to be mostly stratabound,

Criteria	JORC Code explanation	Commentary
geological structure	• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	however there are mineralised cross-structures known to be present which will not be tested by these holes at the optimal orientation • Any biasing effect is yet to be determined
Sample security	• *The measures taken to ensure sample security.*	• Logging and sampling has been carried out by PNX personnel on site and samples submitted to the laboratory by the same people • No third parties have been allowed access to the samples
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits have been carried out at this point

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	• *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.* • *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.*	• Drilling reported is located entirely within MLN1059, a mineral lease granted to Newmarket Gold NT Holdings Pty Ltd which is subject to an earn in agreement (see PNX ASX announcement 14/8/14) whereby PNX can earn up to 90% interest through staged project based expenditure • The mineral lease pre-dates native title. PNX commissioned a heritage survey which cleared the exploration sites of any sensitivities • The site is already highly disturbed as a result of previous mining activities. It is situated on Mary River East Station, with necessary approvals granted for the exploration works
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Gold was first reported at Moline in the 1880's as Housechild's Rush. It was initially worked by the Chinese in small open pits, and selected ore was crushed by hand. • 1891-1900 the Northern Hercules eastern reef was worked underground down to about 218ft (66m). Recorded production in this period was 21,547 oz of bullion from 10,341 tons of ore (possibly incomplete record) including cyanidation. • 1934-37 mining resumed, and again in 1954 when driving and detailed sampling of backs extended to the 300ft (92m) and 400ft (122m) levels. Production from 1954 -1957 was 27,374 tons yielding 11,266oz of gold. • 1981-1989 a consortium, including Greenbushes, Amoco and Cyprus, undertook extensive exploration for gold in the region centred on Moline. Work included regional geological mapping, aeromagnetic surveys, extensive rock chip sampling and wide-spaced reconnaissance soil sample traversing, this led to the identification of all the presently known ore bodies and prospects • Prospects were subjected to detailed follow up of soil sampling, ground magnetics, trenching and RC drilling. Airtrack drilling and ditchwitch trenching were commonly employed to delineate reserves in the oxide zone. About thirty prospects were developed to the drilling stage, and twenty two were brought into production. Open pit

Criteria	JORC Code explanation	Commentary
		mining started in February 1989 and the mine closed in February 1992 having produced approximately 1.6 million tonnes of ore with an average recovered grade of 2.14 g/t Au. The bulk of the ore came from four main pits, namely Northern Hercules, Moline, School and Tumbling Dice, • After mining ceased, exploration of the properties was carried out by a number of Companies, including Newmont, Aztec, Compass, Northern Gold and GBS, exploration was targeting oxide mineralisation and as such limited deeper exploration into primary mineralisation has occurred
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Moline lies in the northern belt of gold, tin and base metal mineralisation which extends from the vicinity of the abandoned Evelyn Zn/Pb/Ag mine to the south for approximately 60km to the Mount Todd gold mine. • Gold mined at Moline came predominantly from the oxidized portions of quartz-sulphide lodes emplaced in shear zones which transect metasediments of the Palaeoproterozoic Pine Creek Orogen. In the primary zone the mineralisation consists of quartz with abundant pyrite and varying amounts of accessory pyrrhotite, arsenopyrite, chalcopyrite, sphalerite and galena. Gold is present as fine (1-80 micron) inclusions in pyrite, arsenopyrite and chalcopyrite, In the primary zone the lodes appear to be relatively narrow and high grade, • Strata of the Mt Bonnie Formation are folded into a series of major isoclinal anticlines and synclines, which are overturned to the northeast, and plunge gently to the southeast. Mineralisation tends to be concentrated along trends which coincide with axial zones of the main anticlines
Drill hole Information	• *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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.*	• Refer to main body of this announcement.

Criteria	JORC Code explanation	Commentary
	• *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.*	
Data aggregation methods	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Significant intersections reported in the main body of the text and figures are aggregated from downhole interval weighted assay results that occur within the main body of mineralisation and typically bounded by intersections >1 g/t, but may include intervals of lower grade mineralisation that would be considered internal dilution if mined • No high cuts have been applied • Interval weighted averages are reported in significant intersections tables
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• The true width of mineralisation is estimated to be approximately 90% of the downhole width
Diagrams	• *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.*	• Refer to main body of this announcement.
Balanced reporting	• *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.*	• No material information has been omitted that PNX are aware of
Other substantive exploration data	• *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.*	• All relevant information has been included to date
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Infill and deeper drilling will be required to understand the size potential of the mineraisation intercepted, however this has not yet

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	been planned or scheduled • Investigation of recoverable un-mined mineralisation underneath the old pits will be undertaken, along with detailed topographic surveys • Initial sighter metallurgical analysis will completed on representative composite samples