

Excellent metallurgical recoveries from Fountain Head Gold Project

- Initial leaching testwork on Fountain Head samples returned excellent gold recoveries with low reagent consumption
- Heap leaching being assessed as a low cost, scalable option for rapidly monetising and generating early cashflow from gold resources at Fountain Head
- Column leach tests underway at various crush sizes for use in scaled-up modelling
- Drill assays from recently completed RC program at Fountain Head due shortly

PNX Metals Limited (ASX: PNX) (“PNX”, “the Company”) is pleased to announce results of initial metallurgical testing of gold ore samples from its 100%-owned Fountain Head Gold Project. The testwork was designed to assess gold recoveries and reagent consumption via standard atmospheric cyanide leaching of gold mineralisation.

The Company recently released a Mineral Resource estimate for the Project of **2.58Mt at 1.7g/t Au for 138,000 oz Au** (Figure 1 and Table 3) (reported in accordance with the JORC Code, 2012, see *ASX release 11 July 2019 for full details including JORC tables*). Fountain Head, together with the Iron Blow and Mt Bonnie volcanogenic massive sulphide (VMS) deposits, form the Hayes Creek zinc-gold-silver Project (“the Project”) in the Pine Creek region of the Northern Territory.

Five bottle roll tests were completed by Bureau Veritas Metallurgy Laboratories (BV) in Adelaide on representative reverse circulation (RC) drill chip samples taken from various locations within the modelled resource shell.

Excellent cyanide soluble (CN) gold recoveries from 88.9% to 97% were achieved on samples with grades ranging from 0.24g/t Au up to 24.05g/t Au. The recoveries of gold and silver, along with low cyanide and lime consumption rates (Table 1) are comparable with other global gold heap leach projects. These results are consistent with historical data from 1996, which also reported high CN soluble gold recoveries predominantly in excess of 90% (Table 2).

Managing Director Comment

PNX Managing Director James Fox said: “The results from this metallurgical testwork are very pleasing in terms of the studies we are currently running to determine the viability of a heap leach starter operation at Fountain Head. Should further work be conclusive, a heap leach operation could provide a low-cost option for developing and monetising the gold resources at Fountain Head, providing valuable cashflow to fund the development of the broader Hayes Creek project.”

PNX is currently considering low-cost and low-risk open-pit mining, with a view to then processing gold mineralisation via heap leaching at Fountain Head. This could provide an opportunity to enhance the overall Hayes Creek economics and extend the Project mine life. The mined-out Fountain Head pit would then still be available for use as tailings storage from subsequent sulphide flotation of Mt Bonnie and Iron Blow ore.

Given these encouraging results the Company will accelerate assessment of this opportunity at Fountain Head and is in the process of finalising a rapid development strategy to be published in early 2020. A significant work program is being planned with new drilling to commence as soon as approvals have been received.

Background

From 2008-2009 gold ore mined by GBS Gold at Fountain Head was processed through the Union Reefs Mill in Pine Creek (now owned and operated by Kirkland Lake Gold ASX: KLA). The results from the initial bottle roll tests, in conjunction with the historic operating data from Fountain Head, clearly demonstrate cyanide soluble gold recoveries in excess of 90% are capable of being achieved through atmospheric leaching during commercial operations.

Potential benefits of a gold heap leach operation at Fountain Head

The Company considers the following advantages in the rapid development of gold heap leaching at Fountain Head:

- Better utilisation of PNX's growing NT gold and base metals assets and avoids sterilising resources or limiting future growth potential
- Utilises the gold resources at Fountain Head to underpin a low cost, scalable operation to generate sufficient cashflow to allow for the subsequent development of Hayes Creek zinc and precious metals sulphide deposits
- Reduces the technical and operating risks, and development timeline (including utilising the existing approvals process that is underway) to production
- Provides a viable, low cost processing method to maximise value from numerous stranded lower grade gold resources within PNX's Project areas
- Takes advantage of a high gold price and supportive environment to position the business for future development, and preserves the in-ground value of Hayes Creek zinc-gold-silver resources
- Limits potential shareholder dilution by staging Project development

Next Steps

Preliminary work which relates to further assessment and the development of a suitable strategy to monetise the gold from Fountain Head includes additional bottle rolls to determine variability, crush size and agglomeration optimisation, and column testing on three approximately one-tonne trench samples.

Pit optimisation studies and preliminary open-pit mine designs based on economic considerations have been generated incorporating haul roads and waste dumps, while scopes of work for mining and crushing have been sent to mining contractors for pricing/quotes.

A geotechnical study for a 1.0Mtpa heap leach facility has been scoped and detailed planning is in progress for further drilling centred around start-up mining at Fountain Head west.

Further drilling completed with assays pending

A follow-up reverse circulation (RC) drill program of approximately 1,650 metres over 18 drill holes was completed in early October at Fountain Head with assays due shortly.

The aim of the drill program was to test areas of open mineralisation adjacent to the current resource envelope and potential higher-grade 'trap sites' within the resource. Interpretation of controls over the gold mineralisation suggest increased grades and thicker intercepts typically occur at the intersection between vertical feeder structures and the anticline fold axis.

About Fountain Head

The scale of the mineralised envelope within the Fountain Head Gold Project is significant as gold mineralisation has been intersected from the north-western edge of the existing historic open-pits, being the limit of the current Mineral Resource, to the Banner prospect (*ASX release 23 August 2018*) - an approximate 1.6km strike, and down to a vertical depth of ~250m. Almost the entire strike extent remains open providing numerous exploration targets. In addition, small-scale historic hard-rock workings have been identified a further 400m to the west of the Banner prospect along the interpreted Fountain Head anticline. This suggests there is potential for further gold mineralisation in this area.

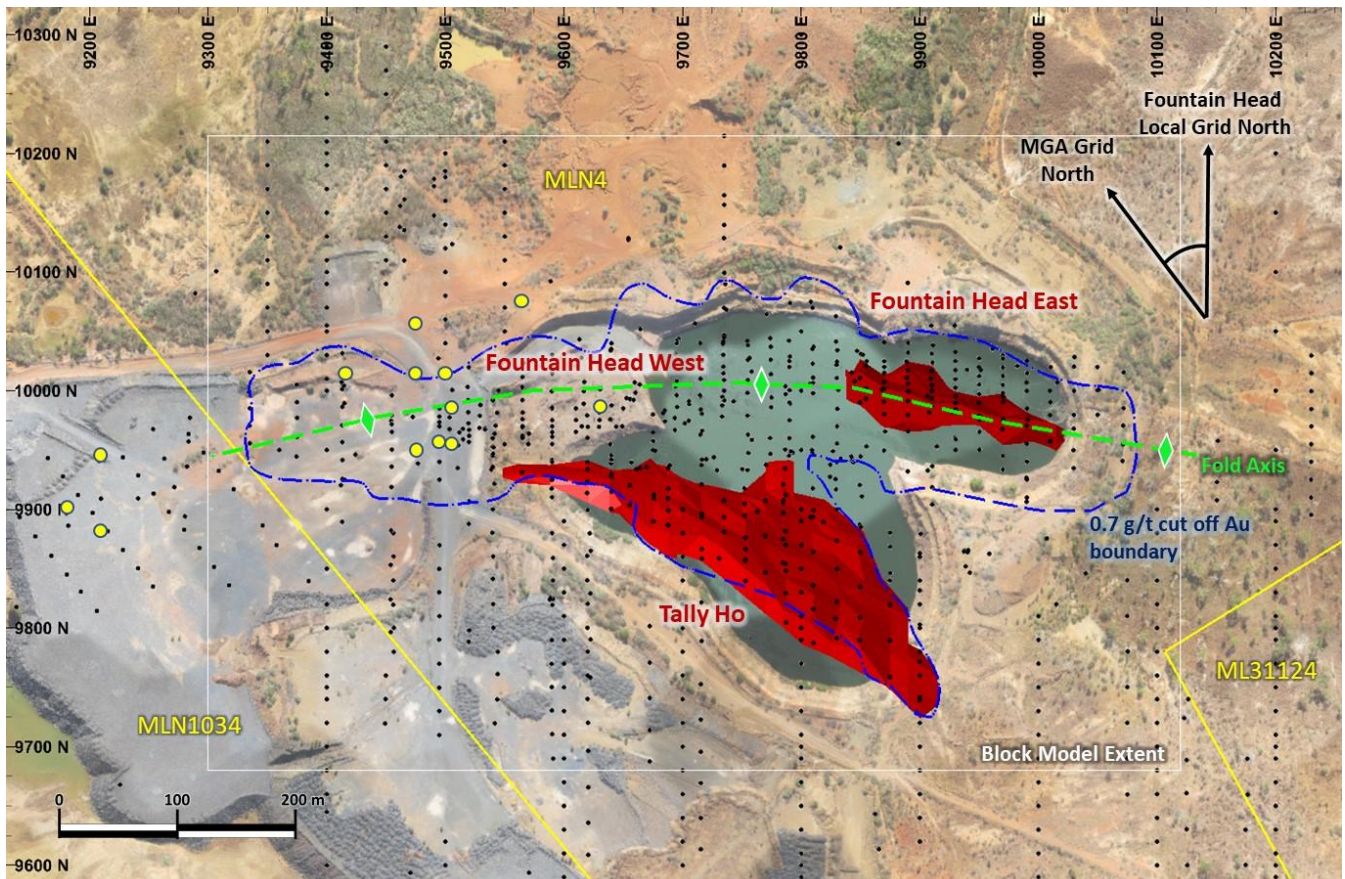


Figure 1: Plan view of the Fountain Head and Tally Ho Mineral Resources showing proximity to historic mining areas, mineral leases and drill collar locations. Fountain Head anticline shown in green. Yellow dots are locations of RC drill holes where samples were used in bottle roll tests.

Summary bottle roll results

Table 1: Bottle Roll Au and Ag recovery

Composite	Calculated Au Head	Au Recovery	CN Consumption	Lime Cons	Calculated Ag Head	Ag Recovery
	g/t	%	kg/t	kg/t	g/t	%
1	3.87	94	0.64	8.2	2.4	100
2	1.26	89	0.20	9.3	1.1	100
3	0.24	92	0.22	21.0	0.9	58
4	24.05	97	0.29	9.6	8.4	99
6	0.72	94	0.09	10.7	0.1	78

Note: The lime consumption was above that of historic test work but this is more indicative of the bottle roll conditions. The target pH for tests was 10.5 however in all cases there was an excess initial addition of lime so test operating conditions were pH 12-13 rather than 10.5 target.

Figure 2: Bottle Roll overall Au recovery and rate of recovery to solution

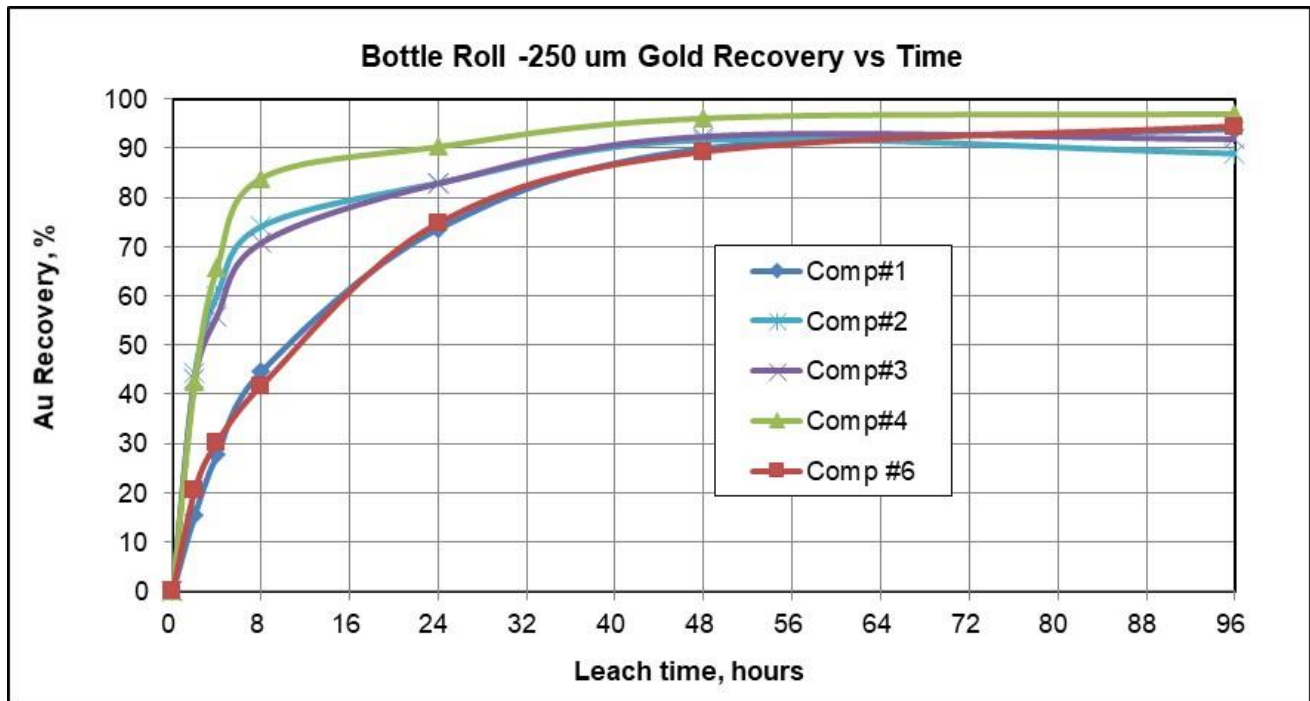


Table 2: Historical Fountain Head CN leach tests

Sample	Calculated Au Head	Au Recovery	CN Consumption	Lime Cons	Reference
	g/t	%	kg/t	kg/t	
FH-303	0.60	91%	0.1	2.0	Ammtec #A5250 1996
FH-318	1.80	66%	0.4	1.6	Ammtec #A5250 1996
FH-325	2.70	92%	0.3	1.4	Ammtec #A5250 1996
FH-327	2.80	92%	0.2	1.3	Ammtec #A5250 1996
FH-336	1.00	93%	0.3	2.6	Ammtec #A5250 1996
FH	3.50	98%	0.4	0.8	Ammtec #A2600 1990

Fountain Head Resource Estimate

Independent mining consultants CSA Global Pty Ltd (“CSA Global”) have estimated the Mineral Resource in accordance with the JORC Code¹, which is summarised in Table 3. * Due to the effects of rounding, the totals may not represent the sum of all components.

Table 3: Fountain Head and Tally Ho Mineral Resources by JORC Classification as at 11 July 2019 estimated utilising a cut-off grade of >0.7 g/t Au which is consistent with the assumed open cut mining method (see PNX ASX release 11 July 2019).

JORC Classification	Tonnage (Mt)	Au (g/t)	Ounces (Koz)
Tally Ho			
Indicated	0.94	2.0	59
Inferred	–	–	–
Total	0.94	2.0	59
Fountain Head			
Indicated	0.50	1.5	23
Inferred	1.15	1.5	55
Total	1.64	1.5	79
Total Fountain Head + Tally Ho*			
Indicated	1.43	1.8	83
Inferred	1.15	1.5	55
Total	2.58	1.7	138

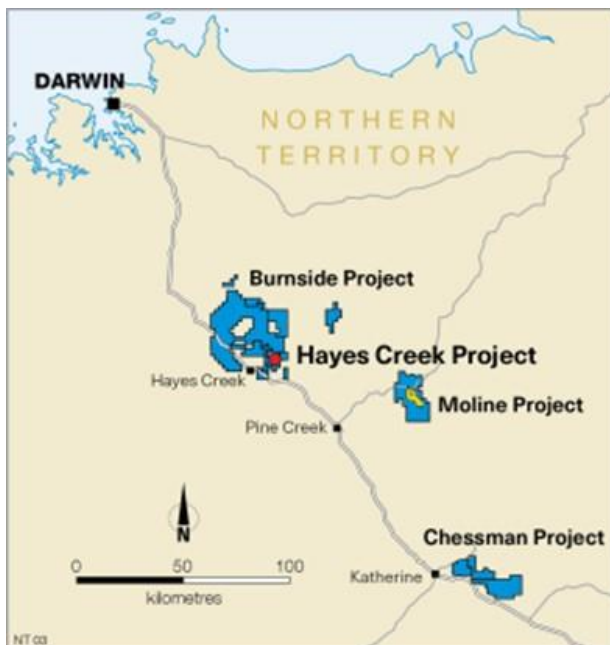


Figure 3: NT Project locations

¹ Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

Competent Person's Statement

The information in this document that relates to mineral processing, metallurgy, and engineering is based on information compiled by Mr David Readett, a Competent Person who is a Fellow of The Australasian Institute of Mining and Metallurgy and Chartered Professional Metallurgical Engineer FAusIMM CP (Met). David Readett is employed by Mworks TDK Pty Ltd who have provided mineral processing, metallurgical and project management services to PNX Metals Ltd. Mr Readett has sufficient experience that is relevant to the style of mineralisation and type of deposit 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 Readett consents to the inclusion in the 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 or contact us:

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	<ul style="list-style-type: none"> • 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 (e.g. '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. 	<ul style="list-style-type: none"> • Metallurgical composite samples for bottle roll tests were obtained from reverse circulation (RC) chips drilled by PNX in 2018 which were cone-split for sampling • Representative samples for the bottle roll tests were established following a review of the available RC drilling material from the 2018 drilling program. Five composites were selected of approximately 10kg, representing intersections of the two ore bodies with coverage along strike, across strike and at depth • These RC interval samples were sent to Bureau Veritas where the composites were generated, head samples taken and necessary sample preparation (grinding to -250um) was undertaken to prepare samples for Bottle Roll Leach tests. • Each ore sample was combined at 40% solids (w/w) with a 750ppm NaCN solution and the pH was adjusted with Lime to pH 12-13. The slurry was sealed in a bottle that was then rolled over a period of 96hrs, with solution samples taken at 2, 4,8, 24, 48 and 96hrs. Upon termination the residual material was washed and dried and re-assayed. • All the RC chips used have been geologically logged by the onsite geologist • Sampling intervals are at 1m intervals for RC chips. Samples were either submitted in 1m intervals, or composited as a 4m interval. • Sample weights were typically 2-3 kg • Magnetic susceptibility measurements were taken using KT-10 meter • 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
Drilling techniques	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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

Criteria	JORC Code explanation	Commentary
	<i>type, whether core is oriented and if so, by what method, etc).</i>	<ul style="list-style-type: none"> A Relfex downhole survey instrument was used to take single shot positional surveys approximately every 30m downhole
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> <i>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.</i> 	<ul style="list-style-type: none"> Sample recovery was estimated visually by inspecting the size of the sample collected, and recorded in the geological log at 1m intervals. Recovery of insitu regolith and fresh rock was excellent 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
<i>Logging</i>	<ul style="list-style-type: none"> <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> <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> All RC chips have been geologically logged by the onsite geologist at 1m intervals and chip trays have been retained and photographed Log fields include lithology, colour, grainsize, texture, veining, 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
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> <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> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> All samples were cone split. The splitter was blown with compressor air and cleaned at the end of each rod (6 m) to reduce sample contamination Duplicate field samples were taken each 25th sample by using a dual outlet on the cone splitter to check representivity of sample Individual samples are placed in individual sample bags and clearly identified prior to submission to the laboratory for assay The sample sizes are typical for the RC drilling method but caution is warranted given reports of coarse gold during historical mining operations
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <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</i> 	<ul style="list-style-type: none"> Original RC 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)

Criteria	JORC Code explanation	Commentary
	<p><i>derivation, etc.</i></p> <ul style="list-style-type: none"> • <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> 	<ul style="list-style-type: none"> • PNX submitted certified reference materials and duplicates samples every 25th sample and also submitted blank quartz material to check laboratory analytical and sample preparation quality at a rate of 3 blanks per 100 • NAL have internal QAQC procedures, including certified reference materials, duplicates and blanks, results of which are reviewed by NAL prior to reporting to PNX • 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 • Bottle roll test work and related analytical reporting was completed by Bureau Veritas in Adelaide.
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • No specific twinned holes have been carried out as yet • No external laboratory assays have been carried out • 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 • 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 • 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
<p><i>Location of data points</i></p>	<ul style="list-style-type: none"> • <i>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.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • Downhole surveys have been collected by at approximate 30m intervals downhole and manually adjusted where magnetic interference is encountered • Modern Drilling - Drill collars have been surveyed using a differential global positioning system (DGPS), to a nominal +/- 20 cm accuracy in the XY direction. Downhole surveys were completed using a Reflex SS single shot camera • Historical Drilling - Most drill hole collars have been surveyed using total station methods. Historic downhole surveys are available for the majority of the Historical Drilling. GBS Gold used a Reflex EZ-Shot, Flexi Kit, or gyroscope. Northern Gold used an Eastman single shot camera. Other companies have not recorded the means of which down hole surveys were collected • Drill collar coordinates are typically recorded in GDA94 (MGA Zone

Criteria	JORC Code explanation	Commentary
		<p>52), then transformed to Fountain Head Local Grid via Datamine Discover software, with +1000 m added to the RL value</p> <ul style="list-style-type: none"> • A hydrographic survey was conducted in January 2019 to obtain an accurate pit floor surface of the water-filled conjoined Fountain Head and Tally Ho open pits. Measurements were made using a remotely controlled hydrographic craft fitted with an RTK GPS and Ceducer sonar system. The remote craft recorded data over a 5 m grid plan of the pit extents • A Terra 3D aerial drone was flown over the Project area in July 2014, producing a high quality DTM surface and a composited aerial photograph using a CanonIXUS127HS camera. Some vegetation artefacts can be seen • The final DTM used in the resource model is a version of the Terra 3D DTM that has been updated with the 2019 hydrographic survey DTM, and then reduced in size to be manageable within the Datamine software
<p><i>Data spacing and distribution</i></p>	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • At Fountain Head, the data spacing is irregular, although much of the drilling is along north-south lines using the Fountain Head Local Grid, dipping at -60°, towards azimuths of either 000° (dipping northward) or 180° (dipping southward). Drill line spacing is typically 20-40 m. On section, holes are spaced 5-30 m apart, with an average of approximately 15 m. There is a rapid decrease in drill data density outside the current resource area, lacking holes north and south, as well as at depth in the east and west. • At Fountain Head East, line spacing is typically 20 m. Holes are spaced tightly along drill lines at around 5 m apart, in order to define the central mineralised shear. In this area, no drilling has tested rocks more than 125 m from surface. • At Fountain Head West, drill line spacing is irregular and lines are either 10, 20 or 40 m apart. The areas with 40 m spacing would benefit from infill drilling, particularly in the far west of the resource. • At Tally Ho, line spacing is typically 20 m, although there are at least 4 lines within the Tally Ho orebody with around 30 m spacing. Around 13 holes have reached depths of over 200 m below ground surface, down to around 350 m, targeting deep extensions to the orebody. • The sample spacing is sufficient to establish the grade continuity of mineralised zones • RC samples are collected at routine 1 metre downhole intervals,

Criteria	JORC Code explanation	Commentary
		<p>which is appropriate for RC drilling and for the thickness of the known mineralisation</p> <ul style="list-style-type: none"> No sample compositing has been carried out at the sampling stage during drilling
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	<ul style="list-style-type: none"> The drilling has been undertaken on sections orthogonal to the strike of the mineralisation. Given the folded nature of the stratigraphy at Fountain Head, and often conformable mineralisation, an effort has been made to drill orthogonal to the stratigraphy. This means holes on each section are often drilled at different orientations. For the most part, holes are drilled at a high angle to the mineralisation. Some holes, however, have been drilled down dip of the stratigraphy, and sub-parallel to the mineralisation. Holes at Tally Ho and Fountain Head East, where the mineralisation is more shear hosted and linear, have been drilled at a high angle to the mineralisation. Most drill holes are oriented to intersect mineralisation close to perpendicular to the interpreted orientation of the main zone of mineralisation. The relationship between the drilling orientation and the orientation of key mineralised structures is not considered to have introduced a sampling bias.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Logging, 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 No third parties have been allowed access to the samples
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits or reviews have been carried out at this point Visual comparison of the assay results with the field portable XRF shows an acceptable correlation with lab results

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"> 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. 	<ul style="list-style-type: none"> The Project comprises four granted Mineral Leases (MLs) totaling 879.67 hectares, all 100% owned by PNX. These include MLN4, MLN1020, MLN1034 and ML31124 All mineral titles are situated within Perpetual Pastoral Lease 1111, NT Portion 695, known as Ban Ban Springs Station

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> PNX has entered into an arrangement with the pastoral lease owners, which governs land access and other obligations for each party. No other landowner access agreements are in place Native Title has been extinguished over the Mineral Leases, and hence, Native Title issues will not affect the development and operation of these project tenements The Mineral Leases are in good standing and no known impediments exist
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> The Fountain Head and Tally Ho deposits have been subject to sporadic exploration over a long period of time. Drilling has taken place when the project has been owned by the following companies: <ul style="list-style-type: none"> PNX Metals (2018) GBS Gold International (2006 to 2008) Northern Gold (2004 to 2006) Dominion Mining Limited (DML) (1993 to 1994) Zapopan (1989 to 1991) NT Gold Mining (NTGM) (1988 to 1989) Destiny Prospecting (1987 to 1988) Australian Coal and Gold (1982). The mineralisation at Fountain Head and Tally Ho occurs within the upper units of the Mount Bonnie Formation, the uppermost division of the South Alligator Group, open folded sequence of mainly pelitic and psammitic Lower Proterozoic sediments with interlayered tuff units. These cyclic siltstone, mudstone and greywacke packages have been metamorphosed to greenschist facies. In the area, stratigraphy is folded along northwest-southeast axes that plunge shallowly to the southeast. The southeast-striking anticline has variable limb dips and the axis is faulted by northwest-southeast trending faults. The sequence has been intruded by pre-orogenic dolerite sills of the Zamu Dolerite and several late syn-orogenic to post-orogenic Proterozoic granitoids. Mineralisation at Fountain Head occurs in veins as either conformable anticlinal lodes (with flanking mineralisation) or subvertical “ladder vein” styled mineralisation associated with brittle failure sub-parallel to the fold axis, and is found within mudstones, greywackes and phyllite units. Sheeted quartz vein stock-works occur mainly in the axial zone with veins predominantly dipping northeast, and some saddle reefs occur in the axial zone). The Tally Ho deposit is located just to the south of Fountain Head

Criteria	JORC Code explanation	Commentary
		<p>deposit and sits on the western limb of the Fountain Head anticline. The Tally Ho deposit strikes sub-parallel to the Fountain Head deposit and consists of a linear zone of mineralisation striking northwest-southeast and plunging to the southeast. The quartz veins are 1–20 cm thick and host gold with a minor pyrite-arsenopyrite association.</p> <ul style="list-style-type: none"> • Previous mining at Fountain Head has consisted of small-scale mining of quartz reefs and alluvials from 1886 sporadically up to 1989. In 1995, Dominion Mining Ltd carried out trial open pit mining at Fountain Head. The Tally Ho lodes were discovered in 2006 and the deposits were mined to approximately 50m below surface by GBS in 2007-2008, producing approximately 1.13Mt @ 1.65 g/t for 60,200oz • See ASX release 11 July 2019 where PNX published the results of a new mineral resource estimate
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> • Mineralisation at Fountain Head occurs as conformable and crosscutting lodes within mudstones, greywackes and phyllite units of a NW /SE striking anticline that plunges to the SE. The lithological units are believed to belong to the Mount Bonnie Formation, within the South Alligator Group. Gold mineralisation is hosted by sub vertical shear related stock-works, fracture zones in grey-wackes and saddle reefs at lithological contacts. Most of the resource is in the hinge zone of the anticline with gold grade rapidly tapering off down dip on the limbs
Drill hole Information	<ul style="list-style-type: none"> • <i>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:</i> <ul style="list-style-type: none"> ○ <i>easting and northing of the drill hole collar</i> ○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • Exploration results are not being reported

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> <i>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.</i> <i>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.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> Exploration results are not being reported
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <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> 	<ul style="list-style-type: none"> Exploration results are not being reported
Diagrams	<ul style="list-style-type: none"> <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> 	<ul style="list-style-type: none"> Exploration results are not being reported
Balanced reporting	<ul style="list-style-type: none"> <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> 	<ul style="list-style-type: none"> Exploration results are not being reported
Other substantive exploration data	<ul style="list-style-type: none"> <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> 	<ul style="list-style-type: none"> All relevant information has been included
Further work	<ul style="list-style-type: none"> <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> <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> 	<ul style="list-style-type: none"> Further drill work will be focused on testing for dip extensions and strike extensions and to confirm grade and geological continuity implied by the current block model Further metallurgical work including materials handling and column tests will be conducted and incorporated in the assessment of Fountain Head heap leaching