ASX Announcement

16 June 2020

This announcement has been authorised to be lodged with the ASX by the Board of Directors of PNX Metals Limited.



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Increase and improved confidence in Mineral Resource at Fountain Head Gold Project

- Updated Mineral Resource estimate completed for the Fountain Head Gold Project (reported in accordance with JORC Code, 2012):
- Fountain Head and Tally Ho total (Indicated and Inferred)
 - 2.94 Mt at 1.7 g/t Au for 156,000 oz Au
- Resource update adds 18koz Au, representing a 13% increase in contained gold, including a 20.5% increase to the Indicated resource category
- The Fountain Head and Tally Ho Mineral Resources are situated adjacent to each other on granted Mineral Leases 100% owned by PNX
- The Mineral Resource occurs from surface down to approximately 190m and is amenable to open pit mining methods
- Potential for future growth in resources remains along strike

PNX Metals Limited (**ASX: PNX**) ("**PNX**", "the **Company**") is pleased to announce an update to the Mineral Resource estimate for the 100% owned Fountain Head Gold Project (reported in accordance with the JORC Code, 2012) located in the Pine Creek region of the Northern Territory.

Managing Director Comment

PNX Managing Director James Fox said: "We are pleased to have delivered an increase in contained gold and gained further support for our geological understanding of and confidence in the mineralisation at the Fountain Head gold Project. This updated Mineral Resource estimate will be used to inform existing pit optimisation and proposed mine schedules to support mining at Fountain Head. The Company is currently assessing a number of proposals to assist with the project capital required for development."

Fountain Head gold Project - Development Opportunity

The Company is currently assessing low-cost, low-risk and scalable processing options to rapidly monetise and generate early cashflow from the gold resources at Fountain Head. This strategy may also provide an opportunity to enhance overall Hayes Creek zinc-gold-silver Project economics and extend the project mine life with the mined-out Fountain Head pit available for use as tailings storage for subsequent sulphide flotation of ore from the Mt Bonnie and Iron Blow deposits at Hayes Creek.

Near-term development of gold resources also capitalises on a supportive current and forecast gold price environment and preserves the in-ground value of the Hayes Creek Project for a possible higher future zinc price environment.



Mineral Resource Statement Overview

Pursuant to ASX listing rule 5.8.1, and in addition to the information contained in the JORC tables (attached), the Company provides the following in respect to the Fountain Head Mineral Resource.

Fountain Head and Tally Ho Mineral Resources

Independent mining consultants CSA Global Pty Ltd ("CSA Global") have reported the Mineral Resource in accordance with the JORC Code¹, which is summarised in Table 1. A summary report prepared by CSA Global forms part of this ASX release (Appendix A) including JORC Table 1.

Table 1: Fountain Head and Tally Ho Mineral Resources by JORC Classification as at 16 June 2020, reported utilising a cut-off grade of >0.7 g/t Au which is consistent with the assumed open cut mining method.

JORC Classification	Tonnage (Mt)	Au (g/t)	Ounces (Koz)	
	Tall	у Но		
Indicated	0.94	2.0	59	
Inferred	-	-	_	
Total	0.94	2.0	59	
Fountain Head				
Indicated	0.89	1.4	41	
Inferred	1.11	1.6	56	
Total	2.00	1.5	96	
	Total Fountain Head + Tally Ho*			
Indicated	1.83	1.7	100	
Inferred	1.11	1.6	56	
Total	2.94	1.7	156	

^{*} Due to the effects of rounding, the total may not represent the sum of all components

The update to the Fountain Head Mineral Resource estimate (**MRE**) (comprising the Fountain Head and Tally Ho deposits) and is based on new geological information derived from analysis and interpretation of the most recent 2019 and 2020 diamond and reverse circulation (RC) drilling campaigns (Figure 1). PNX drilled 77 RC and 2 diamond drill holes for 7,402m at Fountain Head from August 2019 to February 2020. Data density was increased throughout Fountain Head West, modern data QAQC was introduced to Fountain Head East and new extensional zones of open high-grade gold mineralisation were identified along structures trending outside the preliminary pit design to the north-west, south-east and far east of the 2019 resource boundaries, as well as prospects at depth – beyond the current proposed pit outline.

Drill hole FHDD181 has not been included in this MRE as results were not available at the time of completing the estimate. The occurrence of visible gold in diamond drill core from this hole is significant as it suggests not only that the highly prospective Tally Ho lode remains open along strike and at depth to the south-east, but also that the majority of quartz veins at Tally Ho have the potential to host significant coarse and nuggetty gold mineralisation.

Geology and Geological Interpretation

Mineralisation occurs in veins as either conformable anticlinal lodes (with flanking mineralisation) or subvertical structurally hosted ('ladder vein style") mineralisation associated with faults and shears sub-parallel to the fold

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).



axis, and is found within interbedded mudstones, greywackes and phyllite units. Sheeted quartz vein stockworks occur mainly in the axial zone (hinge zone) with veins predominantly dipping northeast, and some saddle reefs occur in the axial zone. Increased grades encountered at the Fountain Head Project are thought to result from secondary deformation of the Fountain Head anticline. Gold is associated with quartz veining containing a pyrite-arsenopyrite sulphide assemblage and coarse gold is not uncommon.

The following key structural settings appear to control gold mineralisation at the Fountain Head and Tally Ho deposits:

- In the Fountain Head deposit area, the structurally controlled system of mineralised quartz veins appears largely restricted to the south-western limb and hinge zone of the Fountain Head Anticline. Mineralisation is preferentially hosted in greywacke and sandstone units.
- Subvertical faults or shears subparallel to fold axial planes.
- Vein infill in dilatant zones in the apex of small-scale anticlinal folds associated with the Fountain Head Anticline.
- Conformable veins dipping away on the limbs of the fold, and conformable saddle reefs within the hinge zone of the fold

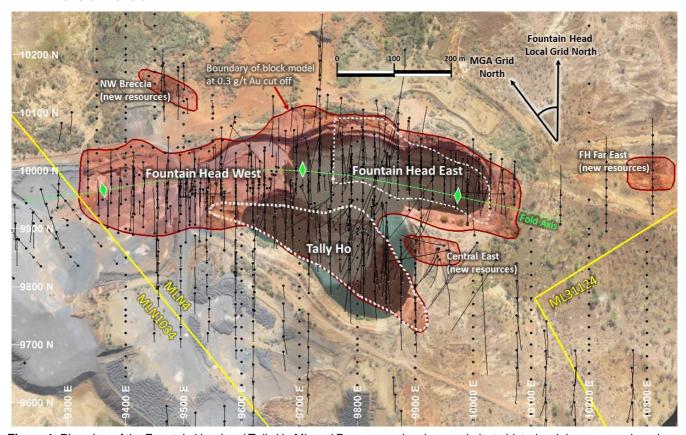


Figure 1: Plan view of the Fountain Head and Tally Ho Mineral Resources showing proximity to historic mining areas, mineral leases and drill collar locations. Fountain Head anticline shown in green.



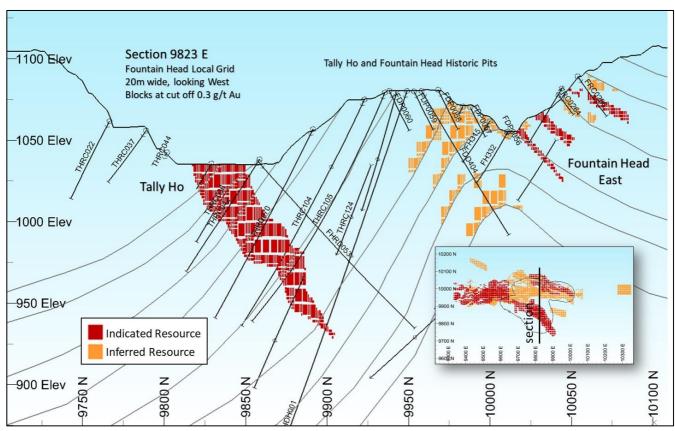


Figure 2: Fountain Head East Cross Section with Indicated and Inferred Resource blocks

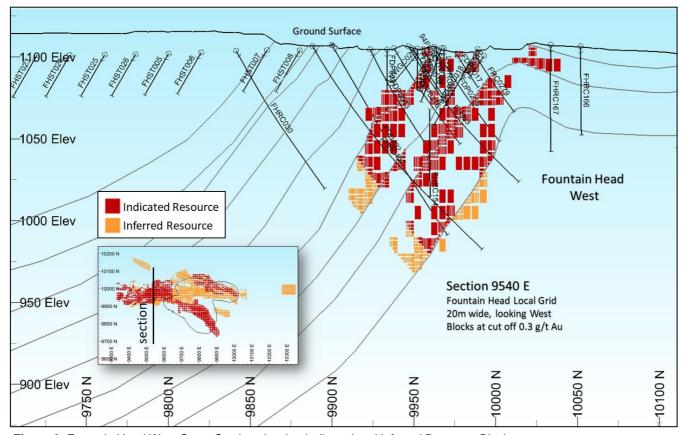


Figure 3: Fountain Head West Cross Section showing Indicated and Inferred Resource Blocks



Updates to the Mineral Resource estimate include:

Fountain Head East (Figure 1 and 2)

2019-2020 drill programs resulted in a reinterpretation of the grade distribution and 11 discrete sub-vertical lodes, following breccia zones were defined sub parallel to the fold hinge. The new drill holes added confidence through modern quality controlled geological and grade information to an already extensive historical dataset, allowing for a portion of the Fountain Head East resource to be upgraded and three of the newly defined lodes, representing 11,000oz Au were added to the Indicated category.

Fountain Head West (Figure 1 and 3)

Drill data density increased, in particular in the central to western part of the resource, to a 15-30m spacing along section and 10-15m spacing vertically, allowing for increased confidence in mineralisation, continuity and increased data density with quality control, resulting in 6,000oz Au elevated to the Indicated category for a total of 30,000oz Au. Mineralisation remains open along strike to the west where drilling highlights the mineralised structure for a further 800m towards the Banner Prospect (see ASX release 23 August 2018).

Northwest Breccia (Figure 1)

The Northwest Breccia is a newly identified mineralised extension outside the known resource and preliminary pit design with a similar orientation to the high-grade Tally Ho mineral lode. Mineralisation follows a NW trending, subvertical structure cross cutting the Fountain Head anticline. This highlights the potential, with drill testing, for further extensions to the resource within the broader mineralised envelope.

Fountain Head Far East (Figure 1)

Approximately 200 metres east of the Fountain Head historical pit, mineralisation within 50m of the surface was identified in historical RC drill hole data – named 'Far East'. Updated geological modelling within this area has allowed for reinterpretation of the Far East mineralisation which appears to be predominantly associated with saddle reef lodes in the hinge of the Fountain Head Anticline. This zone has been identified for follow up drilling due to its position near-surface and higher grades (averaging 5.6g/t Au).

Drilling Techniques

The two main drilling methods employed by numerous drilling companies at the Project between 1982 and present are RC and diamond for a total of 52,089m drilled. These companies used a variety of different single-purpose and multiple-purpose drill rigs.

RC drilling was used extensively due to the shallow, near-surface position of the deposit and was generally completed using either an RC face sampling bit (ranging between $4\frac{1}{2}$ " and $5\frac{3}{4}$ " diameter) or a conventional percussion hammer and crossover sub.

HQ size diamond drilling was generally completed (61.1–63.5mm core). A 3m core barrel was typically used with 3m or 6m rods.

Modern drill collars (from 2004 inwards) have been surveyed using a differential GPS, to a nominal ±20cm accuracy in the XY direction. Drill collar coordinates are typically recorded in GDA94 (MGA Zone 52), then transformed to Fountain Head Local Grid via Datamine Discover software, with +1,000m added to the RL value. Downhole surveys were generally completed using a Reflex SS single-shot camera.

Sampling and Sub-sampling Techniques

Diamond drilling sample intervals were chosen based on lithological contacts or where there were significant changes in the nature of the gold mineralisation, with no overlaps over geological boundaries. Sample boundaries were often pre-existing breaks, otherwise the half core was broken perpendicular to the long core axis.

Core was sampled at 0.2m to 1.5m intervals with half core submitted for assay. The core was cut to divide the mineralisation in half whilst preserving the orientation line. At the completion of each hole, the core was moved to a secure site and the trays shelved for future retrieval.



RC drilling samples were generally collected at regular 1 m intervals using a cone splitter mounted on a drill rig at the bottom of the cyclone. A small calico bag was used to collect the 1/8th fraction and the 7/8th reject split collected in a large plastic bag for logging. In non- mineralised zones, some 1 m samples were composited up to 3 m using a separate riffle splitter or spear, and some samples were not submitted but were stored for possible future use. The reject sample from all RC holes was retained on site, until such time as they were deemed unnecessary or were perished by the weather.

The occurrence of coarse 'nuggetty' gold particles can lead to short-term spatial variability resulting in poor reconciliation (both positive and negative) and sampling challenges.

PNX has worked with and received assistance from CSA Global to develop appropriate sampling and assay protocols to minimise this effect and to ensure the data generated can be used with confidence for grade and Mineral Resource estimation. This work is ongoing. As a result of the 'nugget effect' there is a practical limitation with regards to drill spacing and increasing geological confidence beyond the Indicated category at Fountain Head is therefore unlikely.

Analysis Method

A number of external laboratories have been used to assay drill samples typically using the 50g Fire Assay technique. PNX recently used Northern Australian Laboratories (Pine Creek) and Intertek (Perth).

Modern quality control procedures adopted included the use of appropriate field duplicates, blanks and certified reference materials and indicate acceptable levels of accuracy to support the MRE and no material issues noted due to sample contamination.

Estimation Methodology

Grade was interpolated into all blocks using ordinary kriging.

Dynamic anisotropy was adopted to enable the search ellipse to follow the orientation of the interpreted wireframes for the stratigraphic domains and Fountain Head East.

Following a review of the density data, a fixed value of 2.54 t/m3 was applied to oxidised/transitional material, and 2.75 t/m3 was applied to fresh material.

Mineral Resource Classification

After considering data quality, data distribution, and geological and grade continuity, the following approach was adopted when classifying the MRE:

- Tally Ho was wholly classified as Indicated. The MRE was substantially informed by modern drilling data (93%), and the drill spacing was considered sufficient (approximately 20–25m E x 20–25m RL) to assume grade and geological continuity between points of observation given the style of mineralisation.
- Fountain Head East was classified as a combination of Indicated and Inferred. The deposit is drilled at a pattern of approximately 20m x 20m, however historical samples are dominant with limited associated QC and these samples represent 83% of the total data. A total of eleven lodes were interpreted. All lodes were classified as Inferred except for three, which displayed good geological continuity and contained a reasonable distribution of modern data, which supported the historical data.
- Fountain Head West was classified as a combination of Indicated and Inferred. A wireframe to define the Indicated area was constructed around the area toward the central to western end of the deposit where drilling has been on a pattern that approximates 15–30m E x 10–15m RL, and is informed by both modern and historical drilling data (50% of each). The remaining Mineral Resource within the hinge zone area was classified as Inferred. The Inferred area either has a dominance of historical samples, or a drill pattern that was too broad at this stage to support an Indicated classification.

Cut-Off Grades

A cut-off grade of 0.7 g/t Au was selected following an open-pit optimisation exercise, and comparing a number of similar deposits locally. Sensitivities were assessed at various estimated costs and gold grades with 0.7 g/t Au providing suitable flexibility in pit design.



Metallurgy

Ore from the Project was transported to the Union Reefs Gold Mine for processing when mining occurred from 2007 through 2008, coarse gold was recovered by gravity concentration, and fine gold by cyanide leaching and adsorption on activated carbon.

Hardy and Hague (2001) cite recovery assumptions that were used in earlier optimisation studies with metallurgical recovery assumptions used from 90% to 98%.

PNX has completed several studies and test-work (ongoing) which is consistent with the above (also see ASX 7 November 2019).

Modifying Factors

No modifying factors were applied to the MRE. Mining dilution, ore loss and metallurgical recoveries, capital and operating cost estimates, royalties and metal prices/FX rates will be considered during the planned mining evaluation of the Project.

For additional material information summary information including JORC Table 1 sections 1-3 see attached memorandum by CSA Global.

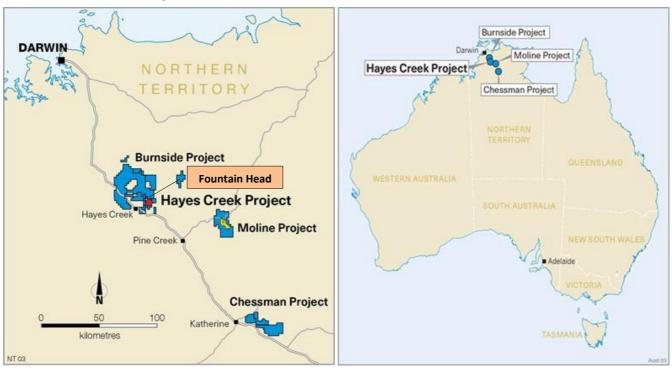


Figure 4: NT Project Locations

Competent Persons Statement

The information in this report that relates to Mineral Resources is based on information compiled by Mr Aaron Meakin and Mr Charles Nesbitt. Mr Aaron Meakin is a full-time employee of CSA Global Pty Ltd and is a Member of the Australasian Institute of Mining and Metallurgy. Mr Charles Nesbitt is a full-time employee of PNX Metals Ltd. Mr Aaron Meakin and Mr Charles Nesbitt have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC code). Mr Aaron Meakin and Mr Charles Nesbitt consent to the inclusion of this information in the form and context in which they occur.

For further information please visit the Company's website www.pnxmetals.com.au or contact us:

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CSA Global Mining Industry Consultants

MEMORANDUM

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To: James Fox

Cc: Charles Nesbitt

Date: 16-Jun-20

From: Aaron Meakin

CSA Global Report №: R225.2020

Re: Fountain Head and Tally Ho Mineral Resource estimates

EXECUTIVE SUMMARY

CSA Global Pty Ltd (CSA Global), a member of the ERM Group of companies, was commissioned by PNX Metals Limited (PNX) to assist with geological modelling and to prepare Mineral Resource estimates for the Fountain Head and Tally Ho deposits, located in the Northern Territory, Australia.

The Mineral Resource estimate for Fountain Head and Tally Ho is shown in Table 1. The Mineral Resource estimate is reported above a cut-off grade of 0.7 g/t Au, consistent with the proposed open pit mining method. The Mineral Resource estimate is reported in accordance with the JORC Code¹.

Table 1: Fountain Head and Tally Ho Mineral Resource estimate, > 0.7 g/t Au

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	0.89	1.4	41	
Inferred	1.11	1.6	56	
Total	2.00	1.5	96	
·	Global			
Indicated	1.83	1.7	100	
Inferred	1.11	1.6	56	
Total	2.94	1.7	156	

^{*} Due to the effects of rounding, the total may not represent the sum of all components

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).



GEOLOGY AND GEOLOGICAL INTERPRETATION

The Foundation Head and Tally Ho deposits are located within the Pine Creek Inlier or "Pine Creek Geosyncline", a basin formed by crustal extension of c. 2500 Ma granitic basement, where about 10 km of Proterozoic (~1900 Ma) shallow marine to continental supracrustal rocks (sediments and volcanics) accumulated in <20 million years (Needham *et al.*, 1988).

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, a tight to isoclinally 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.

Mineralisation at Fountain Head is intimately associated with the Fountain Head Anticline. The Tally Ho deposit is located just to the southwest of Fountain Head deposit and sits on the western limb of the Fountain Head anticline.

Based on previous work, the following key structural settings appear to control gold mineralisation at Fountain Head and Tally Ho:

- The structurally controlled system of mineralised quartz veins appears largely restricted to the hinge zone of the Fountain Head Anticline.
- Subvertical faults or shears subparallel to fold axial planes.
- Vein infill in dilatant zones in the apex of small-scale anticlinal folds associated with the Fountain Head Anticline (Glassock *et al.,* 1998).
- Conformable veins dipping away on the limbs of the fold, and conformable saddle reefs within the hinge zone of the fold. Mineralisation is preferentially hosted in greywacke and sandstone units.

The drilling deposit areas and drilling are shown in Figure 1.

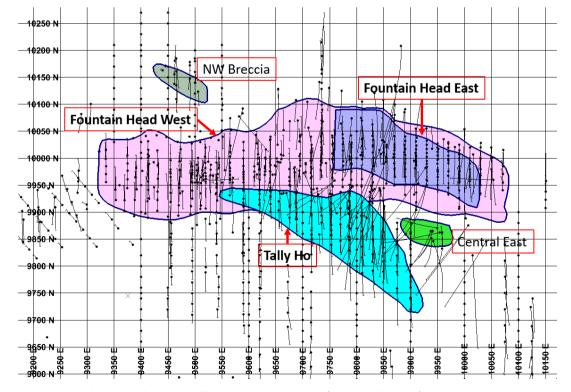


Figure 1: Plan view showing drilling and deposit areas (provided by PNX)



"Grade-based" domains were interpreted where the mineralisation is spatially associated with shear zones. This includes Tally Ho, Fountain Head East, Fountain Head Far East, Central East Lode and Northwest Breccia.

Preliminary statistical analysis was completed on the global dataset to assess if a cut-off grade could be used to define boundaries to the mineralisation. Based on this review, a 0.4 g/t Au cut-off grade was selected as the "Mineralisation Indicator Grade" to build volume models to separate mineralised from unmineralised material.

Eleven separate lodes at Fountain Head East were interpreted. Mineralisation appears to follow breccia and alteration trends, and quartz vein percentages. The interpreted lodes appear to merge with bedding-concordant veins towards the western end. Single lodes were interpreted for Tally Ho, Fountain Head Far East, Central East Lode and Northwest Breccia.

Over the entire strike length of the Fountain Head deposit (shown in pink in Figure 1), the presence of conformable veins on the limbs of the fold, and saddle reefs within the hinge zone of the fold are noted. It has also been noted that greywackes and sandstones appear to be preferential hosts, compared to adjacent siltstone/mudstone units. The importance of lithology in understanding the distribution of the mineralisation in the broader Fountain Head area is therefore well-established.

The upper surfaces of the following lithological units were modelled to support estimating Mineral Resources in the hinge zone area:

- Mudstone A (MA)
- Greywacke B (GB)
- Mudstone B (MB)
- Greywacke C (GC)
- Mudstone C (MC)
- Greywacke D (GD)
- Mudstone D (MD)
- Greywacke E (GE)
- Mudstone E (ME)

Figure 2 is a cross section showing the lithological units and drillhole gold assays.

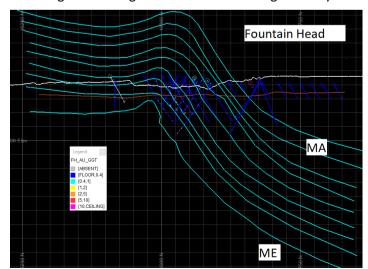


Figure 2: Cross section 9,590 m E showing modelled lithological units and drillholes (Au grades shown); topography profile shown in white and top of fresh rock shown in brown.



After reviewing the distribution of gold in relation to the modelled lithology, it was clear that the lower two Greywacke units (GD and GE) were preferential hosts, likely due to the brittle nature of the host rocks promoting dilation and hydrothermal fluid movement. It was also clear that there was clear continuity conformable with the lithological units in some areas. For the most part, however, the distribution of mineralisation within the lithological units was irregular and did not lend itself to discrete modelling of lenses around each mineralised intersection. Accordingly, lithological boundaries, rather than grade boundaries, were used as domain boundaries ("stratigraphy-based domains").

It was also clear that the mineralisation occurred within the hinge zone, or on the southern limb of the Fountain Head Anticline. In order to constrain reporting of Mineral Resources to within the Fountain Head Anticline hinge zone, a 3D model was created of this hinge zone area. Strings were digitised around the hinge zone on each of the main drill sections and then linked to form the 3D solid model. Mineral Resources have not been reported outside this area, given that the mineralisation rapidly diminishes away from the hinge zone. Without application of this constraint, there was potential for significant grade smearing. The hinge zone constraint model is shown in Figure 3.

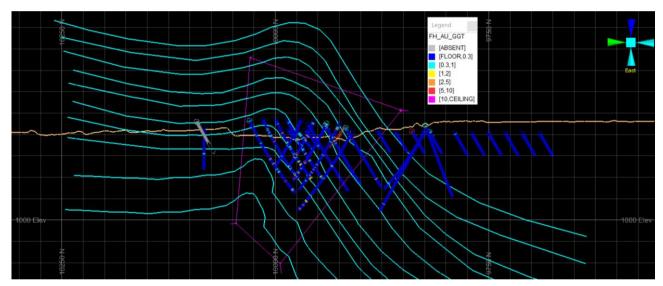


Figure 3: Cross section 9,590 m E showing modelled lithological units in light blue and drillholes (Au grades according to legend shown); topography profile shown in orange. Hinge Zone constraint shown in pink.

DRILLING, SAMPLING AND SUB-SAMPLING TECHNIQUES

Diamond core and reverse circulation (RC) samples have informed the Mineral Resource estimate. Drilling data has been collected during numerous drilling campaigns, commencing in 1982.

The database used for grade estimation is comprised of drilling carried out when the project was under ownership of numerous companies including (listed in chronological order):

- Australian Coal and Gold (1982)
- Destiny Prospecting (1987 to 1988)
- NT Gold Mining (NTGM) (1988 to 1989)
- Zapopan (1989 to 1991)
- Dominion Mining Limited (DML) (1993 to 1994)
- Northern Gold (2004 to 2006)
- GBS Gold International (2006 to 2008)



• PNX Metals (2018 to 2020).

Drilling from 2004 onwards has been collectively termed "Modern Drilling" and comprises approximately 60% of the total dataset used for Mineral Resource estimation. Quality control (QC) samples were routinely submitted throughout these drilling campaigns.

Any drilling prior to 2004 has been collectively termed "Historic Drilling". QC samples were generally not submitted throughout these drilling campaigns. It is therefore not possible to demonstrate the veracity of this data. Documentation is available however which describes data collection techniques for almost all phases of drilling. Although collar location, downhole survey, logging and analytical techniques have varied slightly over the project's history, all can be considered industry standard at the time.

The two main drilling methods that have been employed are RC and diamond drilling. Several drilling companies were employed to undertake the drilling, using a variety of different single-purpose and multiple-purpose drill rigs.

RC drilling was used extensively due to the shallow, near-surface position of the deposit. RC drilling was generally completed using either an RC face sampling bit (ranging between 4 $\frac{1}{2}$ " and 5 $\frac{3}{4}$ " diameter) or a conventional percussion hammer and cross-over sub. Diamond drilling was generally completed using HQ size, producing 61.1 – 63.5 mm diameter core.

Diamond core was generally sampled at 0.2 m to 1.5 m intervals, with half core submitted for assay. RC drilling samples were for the most part collected at 1 m intervals using a cone splitter mounted on a drill rig at the bottom of the cyclone.

Modern Drilling collars have been surveyed using a differential global positioning system (DGPS). Most Historic Drilling collars have been surveyed. Planned coordinates have been used in the instances where no formal surveying has occurred. Modern Drilling downhole surveys were completed using a Reflex SS single shot camera. Historic Drilling downhole surveys are available for the majority of the holes. GBS Gold used a Reflex EZ-Shot, Flexi Kit, or gyroscope. NGNL used an Eastman single shot camera. Other companies have not recorded the means of which down hole surveys were collected.

CRITERIA USED FOR CLASSIFICATION

The Mineral Resource has been classified in accordance with guidelines contained in the JORC Code. The classification applied reflects the author's view of the uncertainty that should be assigned to the Mineral Resources reported herein. Key criteria that have been considered when classifying the Mineral Resource are detailed in JORC Table 1 which is contained in Attachment 1.

After considering data quality, data distribution, and geological and grade continuity, the following approach was adopted when classifying the Mineral Resource:

- Tally Ho was wholly classified as Indicated. The MRE was substantially informed by modern drilling data (93%), and the drill spacing was considered sufficient (approximately 20–25 m E x 20–25 m RL) to assume grade and geological continuity between points of observation given the style of mineralisation.
- Fountain Head East was classified as a combination of Indicated and Inferred. The deposit is drilled at a pattern of approximately 20 m by 20 m, however historical samples are dominant. Historical samples data with no associated QC samples represent 83% of the total data. A total of eleven lodes were interpreted. All lodes were classified as Inferred except for three, which displayed good geological continuity and contained a reasonable distribution of modern data, which supported the historical data.
- Fountain Head West was classified as a combination of Indicated and Inferred. A wireframe to define the Indicated area was constructed around the area toward the central to western end of the deposit where drilling has been on a pattern that approximates 15–30 m E x 10–15 m RL, and is informed by **both** modern



and historical drilling data (50% of each). The remaining Mineral Resource within the hinge zone area was classified as Inferred. The Inferred area either has a dominance of historical samples, or a drill pattern that was too broad that support an Indicated classification.

The Mineral Resource is coloured by classification in Figure 4.

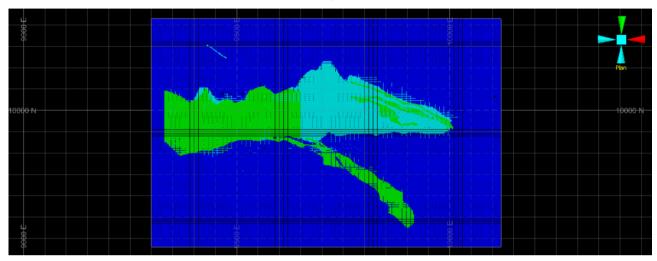


Figure 4: Fountain Head and Tally Ho Mineral Resource classification (Indicated in green and Inferred in light blue)

SAMPLE ANALYSIS METHODS

Several laboratories and assay techniques have been used throughout the Projects history. North Australia Laboratories (NAL) at Pine Creek, Northern Territory, has analysed all modern drilling samples until the recent (2019) drilling programme, when Intertek (Perth) was used. Other laboratories utilised prior to 2004 include Amdel (Darwin), Assaycorp (Pine Creek), Analabs (Darwin), and Classic Comlabs (Darwin and Townsville).

Analysis was by fire assay (50g mainly but sometimes 30 g) with determination by atomic absorption spectrophotometry (AAS).

Modern Drilling Quality Control

PNX insert certified reference materials (CRMs) and field duplicates every 25 samples, and three blanks per hundred samples.

GBS Gold was the first company to routinely insert QC samples into the sample stream. For every 30 samples submitted, one standard was submitted. The following gold standards were used: ST02/0286, ST07/5343, ST02/5355, ST07/9258, ST08/8225, ST09/3320, ST16/5357, ST39/6167, ST44/6335, ST48/9278, ST274, and ST383. The standards were also sourced from Gannet. Field duplicate samples were also submitted, with one sample taken every 25 samples. The duplicate bag was usually placed on the outlet of the splitter, otherwise a scoop was used to collect the sample form the reject bag. Blanks were also inserted routinely, in addition to barren quartz flushes after high-grade samples to reduce the potential of contamination.

Blanks results reveal no material issues with carry-over contamination at the primary laboratory.

Field duplicate results, which are dominated by RC splits, indicate poor precision. High relative difference can indicate poor sampling practice, poor assaying or high nugget effect. Poor sampling precision has been noted throughout the Project's history, with respect to both pulp duplicates and field duplicates, and is likely to be largely attributable to the high nugget nature of the deposit. A sampling study was recently carried out and recommendations were made to better understand the sampling issues and improve sample precision. This remains a work in progress. No significant bias was noted with either the field duplicates or pulp duplicates (relative to the original sample).



The accuracy of the laboratories used by PNX and GBS Gold has been adequately demonstrated using CRMs. Although some outliers are present which require explanation, no significant bias is noted.

All Modern Drilling data was used in the dataset used for Mineral Resource estimation.

Historic Drilling Quality Control

No systematic insertion of QC samples was carried out prior to 2004.

CSA Global has reviewed documentation which discusses this Historical Drilling data and notes the absence of QC data precludes assessment of the quality of the data. Sampling precision, analytical accuracy and carry-over contamination were not able to be assessed. Data collection methods are quite well known, however, and reputable laboratories were used which gives some confidence in the data.

In order to understand the materiality of this dataset in terms of impact on the reported Mineral Resource, CSA Global completed a review of all holes that intersected the wireframes that were modelled as part of this Mineral Resource estimate. The lower confidence that is associated with the Historical Drilling data was considered however when classifying the Mineral Resource.

Although no QC data was available to support the drilling campaigns completed by companies prior to GBS Gold, the data was included for Mineral Resource estimation given that historical documentation indicated that data collection techniques were largely consistent with industry good practise, and reputable laboratories were used. Furthermore, the statistical comparison between the Modern and Historical datasets provided additional support.

ESTIMATION METHODOLOGY

Statistical analysis and variography was completed in Supervisor software. Sample data were composited to 1 m lengths, which is consistent with the dominant sample length, and top cuts were then applied after reviewing the domain sample histogram and log-probability plot. Top cuts were applied on a domain basis and varied from 10 g/t to 50 g/t Au. Some domains were not top cut given that no significant outliers existed in the data.

Variography was completed using Supervisor software to support Mineral Resource estimation. A horizontal variogram fan was initially created to define the known strike of the mineralisation. The dip was then selected from the across-strike vertical fan and the plunge was selected from the dip-plane fan. Variogram models were then created in the direction of maximum continuity (plunge and major direction), orthogonal to the plunge in the plane of the reef (semi-major direction) and across-strike (minor direction). A normal scores transform was applied to the data given the highly skewed nature of the distribution. Downhole variograms were created to determine the nugget effect, with a lag of 1 m adopted to capture the shortest possible sample spacing. The mineralisation displays a high nugget component (>50%) and significant short-range grade variability.

Quantitative kriging neighbourhood analysis (QKNA) was then undertaken to assess the effect of changing key kriging neighbourhood parameters on block grade estimates.

Based on the QKNA results, a block size of 10 m E by 5 m N by 10 m RL was chosen, and a minimum of 6 samples and a maximum of 24 samples were selected. The primary, secondary, and tertiary search ellipse dimensions represent approximately half of the variogram range, the full variogram range and ten times the full variogram range respectively which varies from domain to domain. Discretisation was set to 3 by 3 by 3.

3D block models of the mineralisation were created using Datamine software. Composited and top cut samples were used to interpolate grades into blocks using ordinary kriging. The block models were validated prior to being reported, both visually and by statistical comparison of sample and block grades.



For Mineral Resource estimation a density value of 2.54 t/m³ and 2.75 t/m³ were applied to oxide/transitional and fresh material respectively, following statistical analysis of water immersion results.

CUT-OFF GRADES

The reporting cut-off grade of 0.7 g/t Au has been selected after consideration of the proposed open pit mining method, and is supported by a preliminary pit optimisation study carried out in 2019.

MODIFYING FACTORS

The selected cut-off grade assumes an open pit mining method. The Competent Persons consider this is reasonable given the mineralisation is close to surface and following preliminary results of a pit optimisation exercise which was based on the block model created during this Mineral Resource estimate.

Based on the historical information available, CSA Global considers it is reasonable to assume that the ore from Fountain Head and Tally Ho could be treated using conventional processing methodologies given that the ore was previously treated at Union Reefs Gold Mine.

Additional test work completed in 2019 also suggests there is heap leach potential, and test work is ongoing. Preliminary results are encouraging, and suggest recoveries of 71 to 89%, with most extraction within 48 hours.

Gold is associated with quartz veining containing pyrite-arsenopyrite, and/or coarse gold. CSA Global understands that the majority of the gold is coarse (and free milling), hence could be recovered through gravity concentration processes. Detail surrounding historical metallurgical testwork or achieved actual recoveries were not provided to CSA Global, and is not readily apparent from historical documentation.

REASONABLE PROSPECTS HURDLE

Clause 20 of the JORC Code (2012) requires that all reports of Mineral Resources must have reasonable prospects for eventual economic extraction, regardless of the classification of the Mineral Resource.

The Competent Persons deem that there are reasonable prospects for eventual economic extraction of mineralisation on the following basis:

- The Project is located close to road and port infrastructure, approximately 135 km from Darwin
- Cut-off grades have been adopted which is consistent with the anticipated mining method (predominantly open pit)
- A pit optimisation study has been completed in parallel with this work which shows positive economic results
- There is some potential to increase the Mineral Resource with additional drilling
- Preliminary metallurgical test work results are encouraging.

COMPETENT PERSONS STATEMENT

The information in this report that relates to Mineral Resources is based on information compiled by Mr Aaron Meakin and Mr Charles Nesbitt. Mr Aaron Meakin is a full-time employee of CSA Global Pty Ltd and is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Charles Nesbitt is a full-time employee of PNX Metals Pty Ltd and is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Aaron Meakin and Mr Charles Nesbitt have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Aaron Meakin and Mr Charles Nesbitt consent to the disclosure of the information in this report in the form and context in which it appears.



Attachment 1 JORC Table 1

JORC Table 1 Section 1 – Key Classification Criteria

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.	Samples used in the Mineral Resource estimate (MRE) were obtained through reverse circulation (RC) and diamond drilling methods collected from campaigns completed by several companies from 1982 through 2020.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Diamond core has been sawn in half or quarter using a core saw. RC drilling samples were generally collected at regular 1 m intervals using a cone splitter mounted on a drill rig at the bottom of the cyclone.
	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. "RC 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 (e.g. submarine nodules) may warrant disclosure of detailed information.	RC and diamond drilling were used to obtain 0.5 m to 2 m samples which were pulverised to produce a 50 g charge for fire assay with determination by atomic absorption spectrometry (FA/AAS) for gold. A 30 g charge was used for a minor number of samples.
Drilling techniques	Drill type (e.g. core, RC, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).	RC and diamond (primarily HQ and NQ) drilling were completed to support the preparation of the MRE. The database used for grade estimation is comprised of drilling carried out when the project was under ownership of numerous companies including (listed from most recent): Modern drilling PNX Metals Limited (2018 to 2020) GBS Gold Australia (2006 to 2008) Northern Gold NL (2004 to 2006). Historical drilling Dominion Mining Limited (DML) (1993 to 1994) Zapopan Mining NL (1989 to 1991) NT Gold Mining (1988 to 1989) Destiny Prospecting (1987 to 1988) Australian Coal and Gold (1982). Drilling from 2004 onwards has been collectively termed "modern drilling" in this report and comprises approximately 60% of the total dataset. Quality control (QC) samples were routinely submitted throughout these drilling campaigns. Any drilling prior to 2004 has been collectively termed "historical drilling" in this report. QC samples were generally not submitted throughout these drilling campaigns.



Criteria	JORC Code explanation	Commentary
Drill sample recovery	Method of recording and assessing core and chip	Modern drilling
	sample recoveries and results assessed.	Drilling recoveries are recorded by PNX Metals Limited (PNX) for both RC chips and diamond core. In RC chips, the recovery is visually estimated based on the size and weight of the sample bag and residue. Excellent recoveries were observed in dry samples and reasonable recovery was observed in wet samples, although with some loss of fines. Diamond core recovery is detailed in the geological logs and captured within the database.
		GBS Gold Australia (GBS Gold) drilling recoveries are not available in detail in the reports and data available to PNX. It is noted that all diamond holes suffered varying amounts of core loss.
		Historical drilling
		Diamond drilling completed by Destiny Prospecting (Destiny) records that core drilling recovery in the oxidised rock gave poor recovery. RC drilling (also completed by Destiny) is indicated to have had good recovery above the water table (30–45 m depth), and satisfactory samples in most cases when the drilling continued below the water table. There is no apparent record of sample recovery for other historical drilling.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC drilling was typically carried out using a face- sampling hammer. Core was cut in half using a core saw.
	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.	No relationship between grade and recovery has been identified.
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.	Drill logs capturing lithological data are available for all drilling.
		Modern drilling
		At the completion of logging, the geologist marked the core ready for sampling. Geological descriptions were entered directly onto standard logging sheets, using standardised geological codes.
		Historical drilling
		Historical drilling has been logged, however in most cases the physical logs are not available. The ability to test the veracity of the data in the database is therefore limited.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is generally qualitative in nature. All modern drilling core is stored at Brocks Creek and has been photographed wet and dry.
	The total length and percentage of the relevant intersections logged.	All diamond core and RC drilling has been geologically logged.
Subsampling	If core, whether cut or sawn and whether quarter,	Modern drilling and historical drilling
techniques and sample preparation	half or all core taken.	Diamond samples are generally half-core, with core sawn in half using a core-saw.
	If non-core, whether riffled, tube sampled, rotary	Modern drilling
	split, etc. and whether sampled wet or dry.	RC samples were generally collected using a cone splitter mounted at the bottom of the cyclone at



Criteria	JORC Code explanation	Commentary
		regular 1 m intervals to collect a 1/8th fraction for assay. The splitter was blown out and cleaned after each 6 m drill rod to reduce contamination.
		Historical drilling
		Most historical holes were sampled on a 1 m basis (others sampled on a 2 m basis) via a cyclone and split via a riffle splitter (when dry) and a rotary splitter when wet.
		Historical reports suggest about 20% of pre-2001 holes were drilled using a crossover sub behind the hammer bit. It is thought that this type of technique had the potential to produce contaminated samples below the water table. CSA Global Pty Ltd (CSA Global) understands these holes are mainly the "PDH series" holes that were drilled when Zapopan Mining NL (Zapopan) were project owners. The holes are located in the south-western area away from the main mineralisation at Fountain Head.
	For all sample types, the nature, quality and appropriateness of the sample preparation	Several laboratories and assay techniques have been used throughout the Project's history.
	technique.	North Australia Laboratories (NAL) at Pine Creek, Northern Territory, has analysed all modern drilling samples until 2019. Intertek Perth has analysed the PNX samples from 2019 to 2020.
		Amdel (Darwin), Assaycorp (Pine Creek), Analabs (Darwin), and Classic Comlabs (Darwin and Townsville) were used in historical drilling campaigns.
		Modern drilling All samples submitted were prepared at either NAL, which is an independent laboratory based in Pine Creek in the Northern Territory, or Intertek, Perth.
		Intertek Core samples are initially crushed in a jaw crusher to a size of 10 mm. The jaw crusher is cleaned by compressed air between samples. The sample is then riffle split down to 1 kg, with the remaining samples returned as coarse reject to site and stored under cover for future reference. The 1 kg sample is pulverised using an LM5 pulveriser to a size of 85% passing 75 microns, and the mill cleaned with a barren silica flush between samples. 200 g of this fine material is taken via scoop, from which 50 g is taken for fire assay (FA50). The prill is dissolved by HNO3/HCL and determination is by inductively coupled plasma/optical emission spectroscopy (ICPOES). The remaining sample is kept as a pulp sample for future reference.
		Calicos containing the RC field sample were pulverised in its entirety if under 3 kg. For the 2019 samples, >3kg were split and a 1.2 kg (approx.) split taken for pulverisation. This was changed for the 2020 processed samples to have a 3 kg split taken for pulverising to try to counter the poor repeatability. From the 3 kg (or 1.2 kg) pulp, a 200g split was taken and sent from Alice Springs to Perth for fire assay. From the 200 g pulp, a 50 g sub sample



Criteria	JORC Code explanation	Commentary
		fir fire assay. The results were assessed, and if 1 g/t or over, another 50 g sub sample was taken from the 200 g pulp, and fire assayed several days later (as a repeat). For holes FHRC162 to 179, repeats were also made for every 10 samples, regardless of original assay grade. Also, for holes FHRC162 to 179, an extra laboratory duplicate was taken for every 25 samples.
		NAL
		Upon arrival, samples were sorted and the reconciled against the sample submission documentation. Core samples are initially crushed in a jaw crusher to a size of 10 mm. The jaw crusher is cleaned by compressed air between samples. The sample then passes through a roll crusher to reach a size of 2–3 mm (or more if tabular/platy). This sample is then split down to 1 kg, with the remaining samples returned as coarse reject to site and stored under cover for future reference. The 1 kg sample is Keegor milled to a size of 100 microns, and the mill cleaned with a barren silica flush between samples. 400 g of this fine material is retained for sampling, from which 50 g is taken for fire assay (FA50).
		Historical drilling
		Historical samples have predominantly been assays using 50 g fire assay. Subsampling procedures have varied slightly between the laboratories that have been used.
	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	Subsampling is performed during the preparation stage according to the assay laboratories' internal protocols.
	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.	Modern drilling RC field duplicates were inserted in the sample stream at a rate of one in every 25 samples by GBS Gold and PNX.
		Historical drilling
		Field duplicates were not inserted in the sample stream.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Poor precision is noted from the RC field duplicate results. A sampling study was completed in 2019 and several recommendations were made to improve sampling practises at Fountain Head. Additional work is required to determine the optimal sample size for the style of mineralisation.
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.	The techniques are considered total. For gold, fire assay fusion with a lead oxide flux and various other reagents is used. The dore prill is parted and the Au content analysed by AAS.
	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.	No geophysical tools were used to support the preparation of this MRE.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory	Modern drilling



Criteria	JORC Code explanation	Commentary
	checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	GBS Gold and PNX submitted duplicate samples at a rate of 1:25 to 1:30, certified reference materials (CRMs) at a rate of 1:30 and blanks at a rate of 1:50.
		Historical drilling
		Historical drilling programs did not routinely insert QC samples. QC data was limited to a relatively minor amount of field duplicates and laboratory repeats for these periods. Accordingly, there is greater risk associated with this data.
		Summary
		Given all available QC results, CSA Global considers that a moderate level of confidence can be placed in the precision and accuracy of the analytical data used in the preparation of this MRE.
		QC results for the modern drilling indicate that acceptable levels of accuracy have been established and no material issues with contamination are noted. Poor precision is noted with regard to the field and pulp duplicates. No significant bias exists however in the results. While this is not unexpected for such a high-nugget gold deposit, recommendations have been made to attempt to improve sampling precision in the future.
		Some concern exists with the historical results, given the lack of QC data and therefore the inability to test the veracity of this data.
		The quality of the data has been considered in the classification of this MRE.
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections have been verified by alternative PNX company personnel.
assaying	The use of twinned holes.	No twinning has been completed to verify historical intersections; however, the location and tenor of historical intersections is broadly consistent with modern holes.
	Documentation of primary data, data entry	Modern drilling
	procedures, data verification, data storage (physical and electronic) protocols.	Templates have been set up to facilitate geological and geotechnical logging. Prior to the import into the central database, logging data is validated for conformity and overall systematic compliance by the geologist.
		Geological descriptions were entered directly onto standard logging sheets, using standardised geological codes.
		Assay results are received from the laboratory in digital format.
		Once data is finalised it is transferred to a Microsoft (MS) Access Database on the PNX server, which is backed up and stored offsite weekly.
		Historical drilling
		Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols are largely unknown for historical drilling programs.



Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	No adjustments were made to the analytical data, other than replacing below detection results with a value equal to half the detection limit.
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Modern drilling Drill collars have been surveyed using a differential global positioning system (GPS), to a nominal ±20 cm accuracy in the XY direction. Downhole surveys were generally completed using a Reflex SS single-shot camera.
		Historical drilling Most drillhole collars have been surveyed using total station methods. Historical downhole surveys are available for the majority of the historical drilling. GBS Gold used a Reflex EZ-Shot, Flexi Kit, or gyroscope. Northern Gold NL (NGNL) used an Eastman single shot camera. Other companies have not recorded the means of which downhole surveys were collected.
	Specification of the grid system used.	Drill collar coordinates are typically recorded in GDA94 (MGA Zone 52), then transformed to Fountain Head Local Grid via Datamine Discover software, with +1,000 m added to the RL value.
	Quality and adequacy of topographic control.	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 Canon IXUS127HS 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.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	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 are again 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



Criteria	JORC Code explanation	Commentary
		tested rocks more than approximately 125 m from surface.
		At Fountain Head West, drill line spacing is irregular and lines are either 10 m, 20 m 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 four 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.
	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)	The Competent Persons believe the mineralised domains have sufficient geological and grade continuity to support the classifications applied to the Mineral Resources given the drill pattern.
	and classifications applied.	Mineral Resource estimation procedures are also considered appropriate give the quantity of data available and style of mineralisation under consideration.
	Whether sample compositing has been applied.	Compositing was not applied at the sampling stage.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	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.
	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.	The relationship between the drilling orientation and the orientation of key mineralised structures is not considered to have introduced a sampling bias.
Sample security	The measures taken to ensure sample security.	A PNX geologist and field assistant are always present at the RC drill rig while samples are being drilled and collected. On completion of logging, samples were bagged and tied for transport to either the Brocks Creek compound for holding, or directly to the laboratory by PNX personnel.
		For diamond drilling, core is collected daily from the rig and transported to the Brocks Creek compound. The cut samples are bagged and tied and transported directly to the laboratory by PNX or laboratory personnel for analysis. The Brocks Creek compound is locked and has 24-hour camera security when no personnel are present.
		Sample security measures for drilling programs carried out prior to PNX's ownership are not known.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of sampling techniques and data have been carried out.

PNX METALS PTY LTD FOUNTAIN HEAD AND TALLY HO MINERAL RESOURCE ESTIMATES





JORC 2012 Table 1 Section 2 – Key Classification Criteria

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 Project comprises four granted Mineral Leases (MLs) totalling 879.67 ha, all 100% owned by PNX. These include MLN4, MLN1020, MLN1034 and ML31124.
	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.	All mineral titles are situated within Perpetual Pastoral Lease 1111, NT Portion 695, known as Ban Ban Springs Station.
		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.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	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: PNX Metals (2018 to 2020) GBS Gold (2006 to 2008) NGNL (2004 to 2006) Dominion Mining Limited (DML) (1993 to 1994) Zapopan (1989 to 1991) NT Gold Mining (1988 to 1989) Destiny (1987 to 1988) Australian Coal and Gold (1982).
Geology	Deposit type, geological setting and style of mineralisation.	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, an open to tightly 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 multiple styles, often as 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



Criteria	JORC Code explanation	Commentary
		northeast, and some saddle reefs occur in the axial zone). Mineralisation is often very discontinuous. The Tally Ho deposit is located just to the south of Fountain Head 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. The mineralisation at Tally Ho is very continuous.
Drillhole information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: • Easting and northing of the drillhole collar • Elevation or RL (Reduced Level – Elevation above sea level in metres) of the drillhole collar • Dip and azimuth of the hole • Downhole length and interception depth • Hole length.	Exploration results are not being reported.
	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.	Exploration results are not being reported.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	Exploration results are not being reported.
	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.	Exploration results are not being reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Exploration results are not being reported.
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	Exploration results are not being reported.
mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.	Exploration results are not being reported.
renguis	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. "downhole length, true width not known").	Exploration results are not being reported.
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 drillhole collar locations and appropriate sectional views.	Relevant maps and diagrams are included in the body of the report.
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	Exploration results are not being reported.



Criteria	JORC Code explanation	Commentary
	practiced to avoid misleading reporting of Exploration Results.	
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.	No substantive exploration data not already mentioned in this table has been used in the preparation of this MRE.
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).	Further 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.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Diagrams have been included in the body of this report.

JORC 2012 Table 1 Section 3 – Key Classification Criteria

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Logging was completed onto templates using standard logging codes, although there has been some variation between the project owners. Analytical results received by PNX are imported directly into the MS Access database by a database specialist.
	Data validation procedures used.	CSA Global completed numerous checks on the data. Absent collar data, multiple collar entries, suspect downhole survey results, absent survey data, overlapping intervals, negative sample lengths and sample intervals which extended beyond the hole depth defined in the collar table were reviewed. Only minor validation errors were detected which were communicated to PNX and corrected prior to the preparation of the MRE.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Site visits have been completed by Charles Nesbitt who assumes Competent Person status for the data and geological modelling components of the work. Aaron Meakin assumes Competent Person status for the MRE and has not completed a site visit. Charles Nesbitt visited site numerous times during the 2018, 2019 and 2020 drilling campaigns to inspect operational field activities and supervise the conduct of field staff. Charles Nesbitt found that drilling, logging and sampling of the 2018 drill campaign to be of the appropriate standard to meet JORC compliance.
		Due to safety concerns and the high level of water within the pit, the pit wall geology was inspected from a distance. Large scale features that were



Criteria	JORC Code explanation	Commentary
		observable were found to support the geological model.
	If no site visits have been undertaken indicate why this is the case.	Charles Nesbitt has undertaken a site visit.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	Lithological and mineralisation interpretations were completed by PNX. Peer review of the interpretations was completed by CSA Global.
		Within the broader Fountain Head deposit area, lithology plays a critical role in controlling the mineralisation. In the Fountain Head East and Tally Hi deposit areas, there is a dominant structural control (mineralisation is spatially associated with a shear zone).
		Lithological models In order to better understand the importance of lithology in controlling mineralisation, 3D models of the greywacke and siltstone units in the Fountain Head area were created as follows: • Mudstone A ("MB") • Greywacke B ("GB") • Mudstone B ("MC") • Greywacke C ("GC") • Mudstone C ("MD") • Greywacke D ("GD") • Mudstone D ("MD") • Greywacke E ("GE")
		After reviewing the distribution of gold in relation to the modelled lithology, it was clear that the lower two Greywacke units (GD and GE) were preferential hosts, likely due to the brittle nature of the host rocks promoting dilation and hydrothermal fluid movement. It was also clear that there was clear continuity conformable with the lithological units in some areas, and the mineralisation was intimately associated with the hinge zone of an anticline. For the most part, the distribution of mineralisation within the lithological units was irregular however and did not lend itself to discrete modelling of lenses around each mineralised intersection.
		In order to constrain reporting of Mineral Resources within the stratigraphic domains to the anticline hinge zone, a 3D model was created of the hinge zone area. Strings were digitised around the hinge zone on each of the main drill sections and then linked to form the 3D solid model. Mineral Resources have not been reported outside this area, given that the mineralisation rapidly diminishes away from the hinge zone. Without application of this constraint, there was potential for grade smearing.
		Mineralisation/Grade models The Tally Ho and Fountain Head East areas were relatively linear continuous zones of mineralisation which could be confidently interpreted.
		The Tally Ho deposit is thought to be spatially associated with a shear zone while mineralisation at



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		Fountain Head East is thought to be spatially associated with a zone of deformation along the axis of the Fountain Head Anticline.
		Two discrete shear-hosted lodes (Central East Lode and Northwest Breccia) were also modelled.
		These areas were modelled using a 0.4 g/t Au cut-off grade. Sectional interpretations were joined to form 3D solid models of the mineralisation for each zone, which were used to constrain grade estimation.
	Nature of the data used and of any assumptions made.	Geological logging has been used to assist with lithological modelling. Seven stratigraphic units were modelled to support Mineral Resource estimation in the greater Fountain Head area. Given the erratic nature of the mineralisation in this area, discrete grade-based wireframing was not practical or appropriate. The stratigraphic models were therefore used as domain boundaries, in concert with the hinge zone constraint.
		A cut-off grade of 0.4 g/t Au has been used to define outer mineralisation envelopes for the shear-hosted lodes, where the mineralisation is more linear.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Alternative interpretations are likely to materially impact on the MRE on a local but not global basis. The Competent Person notes that the use of stratigraphic domains at Fountain Head has led to a greater amount of smoothing that would occur with grade-based model constraints. This is considered appropriate given the style of mineralisation.
	The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	 Geological logging and limited historical mapping have been used to guide Mineral Resource estimation. The controls on the mineralisation are both lithological and structural, and this understanding has governed the resource estimation approach. Based on previous work, the following key structural settings appear to control gold mineralisation at Fountain Head and Tally Ho: The structurally controlled system of mineralised quartz veins appears largely restricted to the southern limb and hinge zone of the Fountain Head Anticline. Subvertical faults or shears subparallel to fold axial planes, including three northwest-southeast trending faults that can be seen to offset the orebody and control mineralisation. Vein infill in dilatant zones in the apex of small-scale anticlinal folds associated with the Fountain Head Anticline. Conformable veins dipping away on the limbs of the fold, and conformable saddle reefs within the hinge zone of the fold. Continuity of mineralisation is good at Tally Ho and Fountain Head East, but highly variable in the greater
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan	The Mineral Resource at Fountain Head is contained within an area defined by a strike length of 750 m.



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	width, and depth below surface to the upper and lower limits of the Mineral Resource.	The plan width of the prospective hinge zone is in the order of 100 m. The Mineral Resource at Tally Ho is contained within an area defined by a strike length of 400 m. The plan width is in the order of 5–30 m. Reported Mineral Resources lie either within or close to the bottom (up to 50 m vertically) of a pit shell which was generated by an independent consultant to PNX to demonstrate reasonable prospects for eventual economic extraction. The cut-off grade selected assumes an open pit mining method.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	The MRE has been completed using two estimation domaining approaches. Lithological domains Nine lithological units were model to constrain grade interpolation in this broader area, with MINZON numbers allocated as follows: Mudstone A (unit "MA") MINZON 2 (not reported) Greywacke B ("GB") MINZON 3 (not reported) Mudstone B ("MB") MINZON 4 (not reported) Mudstone B ("MC") MINZON 5 (not reported) Mudstone C ("GC") MINZON 5 Greywacke C ("GD") MINZON 7 Mudstone D ("MD") MINZON 8 Greywacke D ("GE") MINZON 9 Mudstone E ("ME") MINZON 10. Given the irregular and low tenor nature of the mineralisation in the MA, GB, MB and GC units, this material has not been reported as part of the MRE. Grade domains The Tally Ho and Fountain Head East areas were relatively linear continuous zones of mineralisation which could be confidently interpreted. Both of these areas were modelled using a 0.4 g/t Au cut-off grade. Sectional interpretations were joined to form 3D solid models of the mineralisation for each zone. Tally Ho was assigned a field = "MINZON" code of 1, and Fountain Head East was assigned MINZON codes of 10 to 21 (eleven separate lodes). The Central East and Northwest Breccia lodes were assigned MINZON codes of 12 and 23 respectively. Top cuts were selected following statistical analysis, primarily reviewing log-probability plots and histograms. The point at which the number of samples supporting the high-grade tail diminishes was the primary method. The selected top cuts are shown below. MINZONs not listed were not top cut. MINZON 1 30 g/t Au MINZON 5 10 g/t Au MINZON 9 30 g/t Au MINZON 9 30 g/t Au MINZON 10 15 g/t Au MINZON 16 15 g/t Au



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		 MINZON 18 30 g/t Au MINZON 20 10 g/t Au MINZON 22 30 g/t Au.
		Quantitative kriging neighbourhood analysis was undertaken to assess the effect of changing key kriging neighbourhood parameters on block grade estimates. Kriging efficiency and slope of regression were determined for a range of block sizes, minimum/maximum samples, search dimensions and discretisation grids.
		A three-pass search ellipse strategy was adopted whereby search ellipses were progressively increased if search criteria could not be met.
		Dynamic anisotropy was used to ensure undulation in the mineralisation relating to the folded nature of the stratigraphy was captured by the search ellipses (i.e. rotating search ellipses).
		Ordinary kriging was adopted to interpolate grades into cells, with variogram rotations consistent with the search ellipse rotations where dynamic anisotropy was employed.
		Statistical analysis was completed using Supervisor software. All geological modelling and grade estimation were completed using Datamine software.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	No mine production records were available. Production has occurred since previous MREs, hence comparison to these would not be useful.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding the recovery of by-products.
	Estimation of deleterious elements or other non- grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No deleterious elements have been estimated. Metallurgical studies have indicated no issues are likely with deleterious elements. Test work is ongoing.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	A 10 m E x 5 m N x 10 m RL parent cell size was used with sub-celling to 2 m E x 1 m N x 2 m RL to honour wireframe boundaries. The drillhole data spacing is highly variable but approximates 20 m along strike by 10 m to 50 m down-dip. The block size therefore represents approximately half the drillhole spacing.
	Any assumptions behind modelling of selective mining units.	No assumptions were made regarding selective mining units.
	Any assumptions about correlation between variables	No assumptions have been made regarding correlation between variables.
	Description of how the geological interpretation was used to control the resource estimates.	Mineralisation models were constructed using a cutoff grade of 0.4 g/t Au for Tally Ho and Fountain Head East. These models were used to constrain grade estimation in these areas. Over the broader Fountain Head area, lithological models were constructed. Each lithological unit was used as a separate estimation domain. A further "hinge zone" wireframe was also used to prevent Mineral Resources being reported away from the prospective hinge zone area.



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	Discussion of basis for using or not using grade cutting or capping.	Top cuts were applied following statistical analysis.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Drillhole grades were initially visually compared with cell model grades. Domain drillhole and block model statistics were compared. Swath plots were then created to compare drillhole grades with block model grades for easting, northing and elevation slices throughout the deposit. The block model reflected the tenor of the grades in the drillhole samples both globally and locally.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Mineral Resource reported above a cut-off grade of 0.7 g/t Au. This grade was selected following completion of a preliminary pit optimisation exercise which demonstrated potential for open pit extraction.
		The adopted cut-off grade is considered reasonable for Mineral Resources which are likely to be extracted by open pit methods.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	In selecting the cut-off grades, it was assumed that open pit mining methods would be applied.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	It is assumed that there are no major metallurgical issues. The Tally Ho and Fountain Head deposits have been previously mined and processed. Metallurgical test work supports this assumption, however work is ongoing.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should	Environmental considerations have not been considered. It is therefore assumed that waste could be disposed in accordance with a site-specific mine and rehabilitation plan.



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	be reported with an explanation of the environmental assumptions made.	
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	Bulk density determinations adopted the water displacement method. A total of 369 measurements were available, taken from drill core (generally full HQ2 core).
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	Samples were generally wax coated prior to immersion.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Review of the density database indicated little variation between holes, lithology and deposits.
		Density has been applied based on oxidation status, using the mean values within the mineralised area. The following values were applied for all MINZONs: Oxide 2.54 g/cm ³ Fresh 2.75 g/cm ³ .
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	The Mineral Resource has been classified following due consideration of all criteria contained in Section 1, Section 2 and Section 3 of JORC 2012 Table 1.
		After giving due consideration to the integrity of all input data, available QC results, data distribution, geological and grade continuity, areas of the deposit were classified as Inferred where geological continuity is reasonable and the deposit has been drilled on a 50 m E x 50 m RL pattern (or denser). Areas of the deposit were classified as Indicated where geological continuity is good, and the deposit has been drilled on a 25 m E x 25 m RL pattern (or denser).
		Indicated areas were downgraded to Inferred where they were substantial informed by historical data supported by limited QC data.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Appropriate account has been taken of all relevant criteria including data integrity, data quantity, geological continuity, and grade continuity.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The MRE appropriately reflects the Competent Person's views of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The current model has not been audited by an independent third party but has been subject to CSA Global's internal peer review processes.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	The Mineral Resource accuracy is communicated through the classification assigned to this Mineral Resource. The MRE has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this Table. High-nugget gold mines are particularly susceptible to Mineral Resource uncertainty. The presence of



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		coarse gold in addition to significant short scale variability increases the likelihood of "unexpected" resource and financial results. During mining, the potential for poor reconciliation results (both positive and negative) over small production volumes in particular is high.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The Mineral Resource statement relates to a global tonnage and grade estimate. Grade estimates have been made for each block in the block model.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Mining of both the Tally Ho and Fountain Head deposits stopped in 2008. Reconciliation results comparing production statistics with the block model are limited to historical reports. The results generally show relatively close alignment, which gives some confidence in the input data.