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TANAMI GOLD NL

MINERAL RESOURCE UPDATES COMPLETED FOR GOLD DEPOSITS IN THE MOLECH AREA

- **Mineral Resource estimates updated for six gold deposits in the Molech area returning a revised total resource of 950kt grading 3.1 g/t gold for 96kozs.**
- **Models based on a A$2,700 per ounce gold price, benchmark costs and processing recoveries.**
- **Part of the ongoing transition of Mineral Resources on the Central Tanami Project to JORC 2012 standard.**
- **Updated Mineral Resource estimates for 14 Central Tanami Project gold deposits in progress.**
- **Planned drilling at Beaver targeting potential depth extensions, part of the Northern Territory Government's Resourcing the Territory Exploration Grant is currently in progress.**

Perth, Australia, 30 August 2023: Tanami Gold NL (ASX:TAM) ("Tanami Gold" or the "Company") is pleased to advise that the Central Tanami Project Joint Venture ("CTPJV") have completed updates of the Mineral Resource estimates for the Beaver Gold Deposit ("Beaver"), Banjo Gold Deposit ("Banjo"), Bonsai Gold Deposit ("Bonsai"), Orion Gold Deposit ("Orion"), Cheeseman Gold Deposit ("Cheeseman") and the Pendragon Gold Deposit ("Pendragon").

The CTPJV is a 50/50 Joint Venture between Tanami Gold and ASX listed Northern Star Resources Limited ("Northern Star") (ASX:NST), which was established to advance exploration on the 2,211km2 tenement area in the Tanami Region held by the CTPJV.

These deposits are part of the Central Tanami Project, located approximately 36 kilometres west of the Central Tanami Mill Site in the Molech area. Beaver, Banjo, Bonsai, Orion and Cheeseman resources are within granted Mineral Lease, MLS180, whilst Pendragon is located on the surrounding granted Exploration Licence EL26925.

The revised Mineral Resource estimates for Beaver, Banjo, Bonsai, Orion, Cheeseman and Pendragon total 950kt grading 3.1 g/t gold for 96kozs as of 30 June 2023 (Table 1). This represents a decrease of 43% in tonnes and a 12% increase in grade, for a reduction of 37% in contained ounces compared to the historic Molech Mineral Resource estimate.

The updates are part of an ongoing transition of the Central Tanami Project Mineral Resource estimates to allow these estimates to be reported in accordance with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "2012 JORC Code"). Mineral Resource estimates for a further 14 Central Tanami Project gold deposits are in progress.

The estimates were compiled by mining consultants MoJoe Mining Pty Ltd ("MJM") using revised geological models that better reflect the mineralised systems. The reported Mineral Resources have been tightly constrained by Whittle and Stope Optimisations with deposit specific cut-off grades based on a A$2,700 per ounce gold price, haulage to the existing Central Tanami mill site, benchmark operating costs and free milling processing recoveries.

The drilling of two diamond core drill holes at Beaver targeting potential depth extensions is currently in progress. This drilling is co-funded through the Round 16 Northern Territory Government's Resourcing the Territory Exploration Grant, which was received by the CTPJV.

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Table 1 - Mineral Resource estimates for the Molech area gold deposits at the Central Tanami Project in the Northern Territory as of 30 June 2023

	COG (g/t Au)	Measured			Indicated			Inferred			Total		
		Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)
Beaver Gold Deposit													
OP	0.65	-	-	-	100	3.9	13	41	4.1	5	140	4.0	18
UG	SO @ 1.80	-	-	-	110	3.3	12	140	3.2	14	250	3.3	26
Total		-	-	-	**210**	**3.6**	**24**	**180**	**3.4**	**20**	**390**	**3.5**	**44**
Banjo Gold Deposit													
UG	SO @ 1.80	-	-	-	120	3.6	13	23	2.2	2	140	3.4	15
Total		-	-	-	**120**	**3.6**	**13**	**23**	**2.2**	**2**	**140**	**3.4**	**15**
Bonsai Gold Deposit													
OP	0.65	-	-	-	110	2.1	8	25	2.8	2	140	2.2	10
UG	SO @ 1.80	-	-	-	9	2.1	1	73	2.7	6	81	2.6	7
Total		-	-	-	**120**	**2.1**	**8**	**98**	**2.7**	**9**	**220**	**2.4**	**17**
Orion Gold Deposit													
OP	0.65	-	-	-	39	3.1	4	9	5.7	2	47	3.6	5
UG	SO @ 1.80	-	-	-	27	2.3	2	17	2.6	1	43	2.4	3
Total		-	-	-	**65**	**2.8**	**6**	**25**	**3.7**	**3**	**91**	**3.0**	**9**
Cheeseman Gold Deposit													
OP	0.65	-	-	-	11	4.8	2	8	2.3	1	19	3.7	2
UG	SO @ 1.80	-	-	-	-	-	-	50	3.5	6	50	3.5	6
Total		-	-	-	**11**	**4.8**	**2**	**59**	**3.4**	**6**	**69**	**3.6**	**8**
Pendragon Gold Deposit													
OP	0.65	-	-	-	-	-	-	24	2.2	2	24	2.2	2
UG	SO @ 1.80	-	-	-	-	-	-	17	2.3	1	17	2.3	1
Total		-	-	-	-	-	-	**41**	**2.3**	**3**	**41**	**2.3**	**3**
Total		-	-	-	**520**	**3.2**	**53**	**430**	**3.1**	**42**	**950**	**3.1**	**96**

Notes:
Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The quantities contained in the above table have been rounded to two significant figures to reflect the relative uncertainty of the estimate. Rounding may cause values in the table to appear to have computational errors.

Mineral Resources are reported on a dry in-situ basis.

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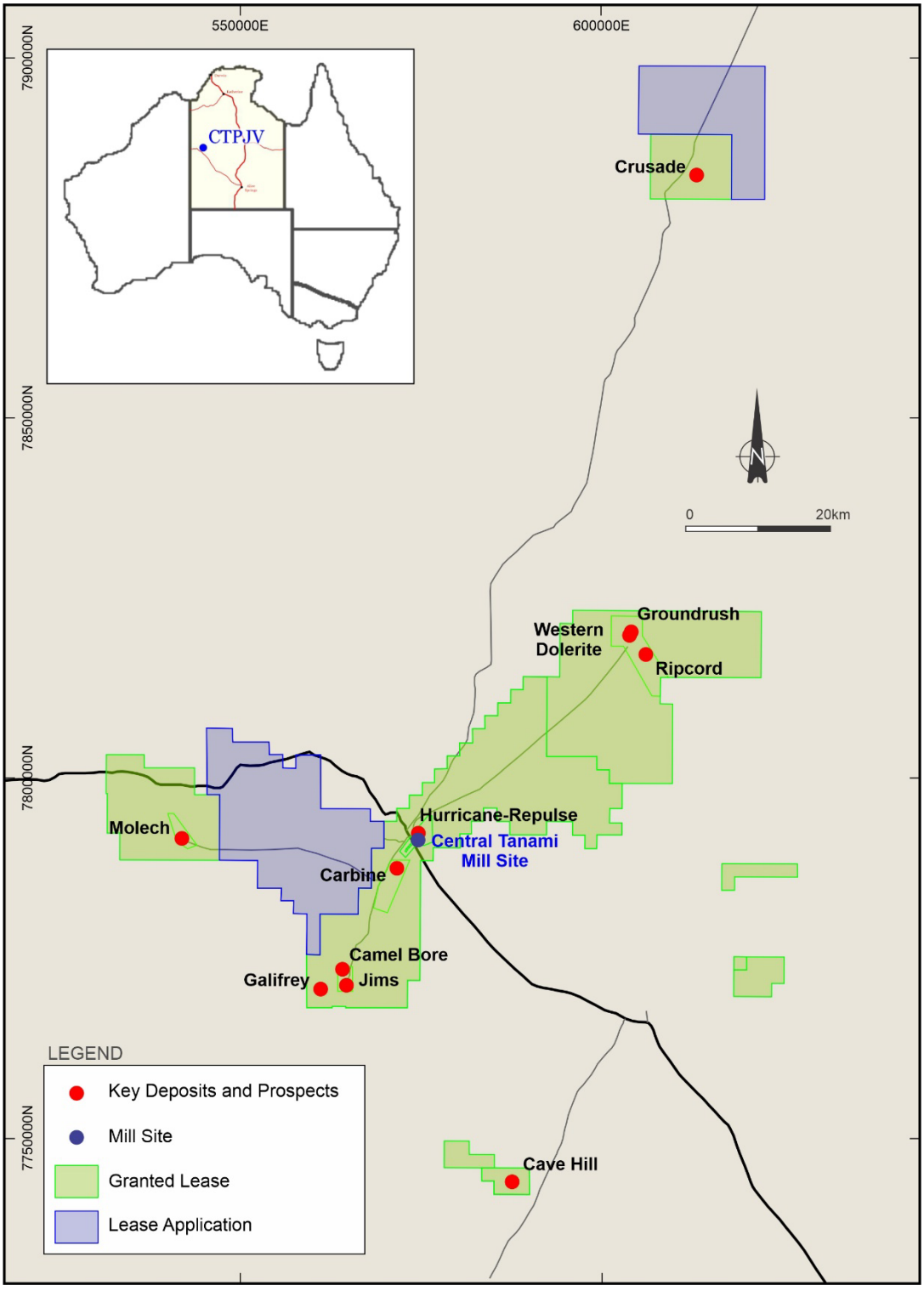


Figure 1 – CTPJV Project Tenure

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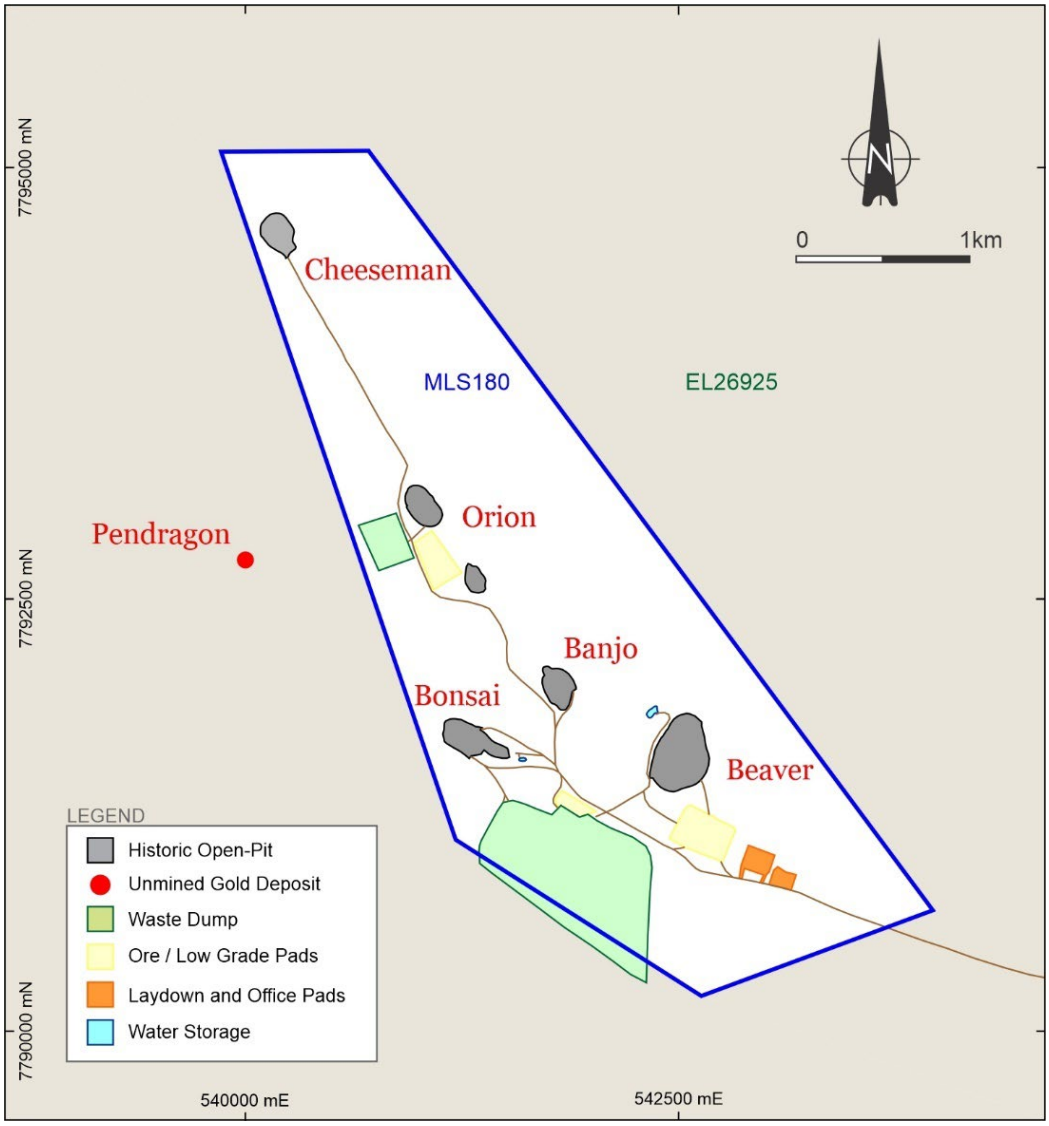


Figure 2 – Molech Area Location Plan

Beaver Gold Deposit

The updated Beaver Mineral Resource estimate returned:

- within the optimised pit shell, using A$2,700 per gold ounce, at a reporting cut-off grade of 0.65 g/t gold a Mineral Resource of 140 kt grading 4.0 g/t gold for 18 kozs; and
- below the optimised pit shell using A$2,700 per gold ounce and within the A$2,700 underground stope optimisation a Mineral Resource of 250 kt grading 3.3 g/t gold for 26 kozs.

The combined total of 390 kt grading 3.5 g/t gold for 44 kozs, represents a 1% increase in grade and a 6% decrease in tonnes and ounces when compared to the historic resource estimate.

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Table 2 - Mineral Resource estimate for the Beaver Gold Deposit as of 30 June 2023, part of the Central Tanami Project in the Northern Territory

	COG (g/t Au)	Measured			Indicated			Inferred			Total		
		Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)
Beaver Gold Deposit													
OP	0.65	-	-	-	100	3.9	13	41	4.1	5	140	4.0	18
UG	SO @ 1.80	-	-	-	110	3.3	12	140	3.2	14	250	3.3	26
Total		-	-	-	**210**	**3.6**	**24**	**180**	**3.4**	**20**	**390**	**3.5**	**44**

Beaver was previously subject to open-pit mining by Otter between June 1999 and April 2001, with 540 kt mined at a reconciled grade of 3.3 g/t gold for 57 kozs of gold. Mining ceased due to geotechnical concerns from wall failures in the west and south walls and water in-flows.

- ***Geology and Geological Interpretation***

The Beaver deposit is hosted by intercalated mudstone, siltstone, sandstone, coarse grained volcanoclastic units, and undifferentiated basalt from the Mt Charles Formation.

Open-pit mapping shows the lithology as a thick sequence of mudstone to siltstone that strikes 315° and dips 70° south. Numerous faults transect the local geology.

Historic production came from two dominant structures locally named the Main and East Lodes. Both lodes are offset by cross cutting faults with a displacement of 15 to 20 metres.

The Main Lode is terminated in the south by a 290° trending structure that hosts the Bonsai mineralisation. Gold mineralisation appears to be smeared along this structure and was noted to be erratic in grade and weakens with distance from the Main Lode.

The southern part of the Main Lode is greater than 2 metres in width and consists of quartz veining and quartz stockworks within a 20-metre-wide altered shear, with visible gold noted in the quartz veining. The strike length is of the order of 210 metres. The northern vein is described as a massive quartz vein up to 1.5 metres true thickness within a 5 to 8 metre wide shear. This lode has a strike of about 110 metres.

The East Lode has a strike length of about 160 metres in the south and 100 metres in the north. The southern vein has been described as greater than 1 metre true thickness of massive quartz vein and stockworks within a 5 to 8 metre wide shear zone. Visible gold has been noted. The northern vein of the East Lode is only 0.5 metre wide within a 2 to 3 wide shear.

The best gold grades were found in the volcanoclastic sediments, and it was noted by Otter that widths and grades dropped off in the basalt, which are interpreted to crosscut the mineralisation.

- ***Drilling Techniques***

The various prospects on the Molech tenement, MLS180 were sampled using surface diamond core drill holes (“DDH”), reverse circulation (“RC”), air-core (“AC”), rotary air blast (“RB”) and water bore (“WB”) drill holes, as well as ditch witch trench lines (“DW”), with drilling completed by various owners from 1994 through to 2014.

349 RC and 5 DDH drill holes were used to interpret and model the Beaver deposit.

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Table 3 – Summary of Molech (MLS180) Drilling and in the Beaver Resource Model

In Molech Database			In Beaver Resource Model	
Hole Type	**No. Holes**	**Metres drilled**	**No. Holes**	**Intersection Metres**
AC	158	13753		
DDH	17	2639.37	5	43.35
DW	3113	118578.9		
RB	1112	56955		
RC	1947	124001.2	349	2636.5
SL_RC	12	320		
WB	24	1764		
Grand Total	**6383**	**318,011**	**354**	**2679.85**

- ***Sampling and Sub-Sampling Techniques***

For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Historically, where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken.

For drillholes completed by Tanami Gold, all samples were taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site.

All diamond drill holes drilled from 1990s to 2011 were photographed and half core assayed in 1 metre intervals with the remainder retained for future reference. Core is stored in racks or on pallets at the core yard located at the old exploration camp, approximately 5km to the south of the Central Tanami Mill Site.

- ***Sample Analysis Method***

During mining operations (1990s to 2001) under Otter, drill samples were analysed offsite at ALS Alice Springs, however with the availability of the onsite laboratory, the database does include some onsite analysis. There was no fixed procedure for selecting onsite or offsite analysis, rather the choice was governed by onsite laboratory availability. Analysis (both onsite and offsite) was by AAS with selective Fire Assay checks. It should be noted that all onsite analysis was performed with a 20ml aliquot whereas ALS use a 50ml aliquot for all AAS readings.

The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff.

Tanami Gold (2010 – 2012) sent samples to the Genalysis Laboratory in Alice Springs for analysis by 50g Fire Assay with Atomic Absorption finish (FA50/AA). No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.

- ***Estimation Methodology***

Geology and mineralisation interpretations were prepared by MJM in Surpac software. A low grade cut-off of 0.5 g/t gold was used for gold mineralisation wireframes, but some lower values have been incorporated to enhance the continuity. Geology interpretations were prepared from drill hole and

aeromagnetic data. Major structural features were interpreted from the geophysics to guide the geology and mineralisation interpretations.

The Beaver mineralisation wireframes were validated in Surpac to form three-dimensional models ("3DM"). The gold envelopes were modelled into a total of 31 individual domains or lodes, with mineralisation classified into 2 categories, sediment / basalt or laterite hosted.

The wireframes of the mineralised zones were used to code the database to allow identification of the resource intersections. Surpac software was then used to extract down hole composites within the different resource domains. All holes were composited to 1m as 99% of the sampling was at 1m intervals. Individual composite files were created for each of the domains in the wireframe models and summary statistics determined.

Analysis of statistics and histogram plots for all lodes suggested that high grade cuts were required for 9 lodes. A high grade cut of 10 to 21 g/t gold was applied to some of the lodes for gold. This resulted in a total of 105 composites being cut or 3.9% of the data. The high-grade cuts were applied to the composite data prior to grade estimation.

Mineralisation continuity was examined via variography to determine the appropriate kriging parameters for estimation. All variography was completed using Supervisor software.

A block model was created using Surpac software to encompass the full extent of the deposit. The block model used a primary block size of 10m NS by 5m EW by 5m RL with sub-blocking to 2.5m by 1.25m by 1.25m. The parent block size was selected based on approximately half the average drill spacing of RC drilling in the well drilled areas, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.

OK grade interpolation was used to estimate gold values in the Beaver block model using the nugget, sill values and ranges determined from the variogram models. For all zones in the block model, the wireframe interpretations were used as hard boundaries in the interpolation. That is, only grades inside each lode were used to interpolate the blocks inside the lode.

An orientated 'ellipsoid' search was used to select data for interpolation. The ellipsoid was oriented to the average strike and dip of the mineralised zones.

Search ellipses and the minimum and maximum number of samples were lode dependent. A first pass search radius of 25 to 40 metres with a minimum number of samples of 2 to 6 samples and a second pass radius of 50 to 80 metres with a minimum number of 2 to 6 samples were used. A third pass search radius of 100-160m was used with 2 to 4 samples to ensure all blocks within the mineralised lodes were estimated. The maximum number of samples ranged from 4 to 26 depending on the number of samples in the domain.

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Table 4 - Beaver Interpolation Parameters

Parameter	Pass 1	Pass 2	Pass 3
Search Type	Ellipsoid	Ellipsoid	Ellipsoid
Bearing	340° to 88°		
Dip	0° to 90°		
Plunge	-55° to 90°		
Major-Semi Major Ratio	1.0 to 3.0		
Major-Minor Ratio	3.0 to 5.0		
Search Radius	25-40	50-80	100-160
Minimum Samples	2 to 6	2 to 6	2 to 4
Maximum Samples	4 to 26	4 to 26	4 to 26
Max. Sam. per Hole	3 to 4	3 to 4	3
Block Discretisation	1 X by 2 Y by 1 Z		
Percentage Blocks Filled	81%	17%	2%

Bulk density values were applied by RL over 20 metre increments using average bulk density measurements for basalt and sediment and then compensating for oxide and transitional material.

Table 5 - Bulk Density Values.

Rock type	RL		Bulk Density
	From	To	Tonnes m^3
TR	surface	380	2.20
Sedimentary Felsic Volcanic	440	360	2.20
	360	340	2.30
	340	330	2.40
	330	320	2.50
	320	300	2.60
	300	290	2.70
	290	180	2.80
Basalt	surface	400	2.10
	400	380	2.20
	380	360	2.30
	360	340	2.40
	340	320	2.50
	320	300	2.60
	300	290	2.70
	290	180	2.80

- ***Cut-off Grades***

The Mineral Resource estimate has been constrained by the wireframed mineralised envelopes, is undiluted by external waste and reported above a 0.65 g/t gold cut-off grade for open pit material within a $AU2700 pit shell. The underground resource is reported within a $AU2700 optimised stope and is undiluted by waste.



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The 0.65 g/t gold breakeven in-situ cut-off for the open-pit Mineral Resource estimate was based on the Whittle assumptions provided in Table 6. The Whittle assumptions have been derived from Northern Star benchmarks and studies and factored to reflect costs in the Northern Territory.

Table 6 - Molech Open Pit 2023 Whittle Assumptions.

Assumptions	Units	Values
OP Mining Recovery	%	98%
OP Mining Dilution	%	10%
Oxide and Trans Processing Recovery	%	90.0%
Fresh Processing Recovery	%	90.0%
Oxide and backfill slope	degrees	45
Trans and fresh slope	degrees	39
Backfill or Waste Dump Mining cost *	$/t rock	2.50
Mining cost *	$/t rock	4.00
Incremental Ore Mining cost *	$/t ore	0.00
Open Pit Grade Control cost *	$/t ore	0.80
Mill Opex cost (2.0Mtpa) *	$/t ore	30.92
ROM to mill transport distance (Current Mill location)	km	37.4
ROM to mill transport cost *	$/t ore	3.74
Admin (G&A) cost *	$/t ore	4.50
Northern Territory/Contingency Cost Factor (10%)	$/t ore	4.45
Capex	$	0
Au Royalty	%	5%
Au Price	AU$/tr.oz	2,700

A 1.8 g/t gold breakeven in-situ cut-off for the underground Mineral Resource estimate was based on the Optimiser Assumptions provided in Table 7. These have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory

Table 7 - Stope Optimiser Assumptions.

Assumptions	Units	Values
UG Mining Unplanned Recovery	%	5%
UG Mining Unplanned Dilution	%	5%
Processing Recovery	%	90%
HW planned dilution skin	m	0
FW planned dilution skin	m	0
Min Mining Width	m	2.0
Stope optimisation length (along strike)	m	10
Sub level interval	m	10
Optimise grade or metal		grade
U/G Stoping Costs	$/t ore	70.00
U/G Backfill Cost	$/t ore	0
U/G Opex Fixed Cost	$/t ore	5.00
Mill Opex cost (2.0Mtpa)	$/t ore	30.92
ROM to mill transport (Current Mill location)	$/t ore	3.74
Admin (G&A)	$/t ore	4.50
NT Factor (10%)	$/t ore	11.42
Capex	$	0
Au Royalty	%	5%
Au Price	AU$/tr.oz	2,700

* Unplanned recovery is used in the in-situ COG calc but not included in the result

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- ***Classification Criteria***

The Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. No Measured Resource was categorised due to no actual bulk density data, no QAQC data, open pits finishing early due to geotechnical issues, water ingress and loss of the detailed mining history. The Indicated Mineral Resource was defined within areas of RC and diamond drilling of 25 by 25 metre, where the continuity and predictability of the lode positions was good, and the estimation had reasonable slopes of regression. The Inferred Mineral Resource was assigned to areas where support for the continuity of mineralisation was limited by wider spaced drilling or insufficient drilling in smaller lodes. The minimum requirement for an inferred resource is 3 drill holes spaced apart so that strike and dip can be determined.

- ***Mining, Metallurgy and Other Modifying Factors***

Mining

Whittle and Stope Optimisations were carried out as part of the Mineral Resource estimate process. The Whittle and Stope Optimisation assumptions have been derived from Northern Star benchmarks and studies and factored to reflect costs in the Northern Territory. These are provided in Tables 6 and 7.

Metallurgy

Metallurgical testing was carried out in August 1998 on samples from 3 RC holes PGRC075, PGRC080 and PGRC081. The extract depth downhole of the samples is unknown but the material is derived from the Main Lode in the Beaver open-pit. The metallurgical test work undertaken on samples from Beaver may not be fully representative of the entire Molech area.

Table 8 - Beaver Metallurgical Summary

Sample	Grind	Gold Head Grade (g/t)		Residue (g/t)		Extraction	WEATHERING
	µm	Assay	Calc	@ 24 hrs	@ 48 hrs	%	
PGRC075	95	6.44	6.66	0.64		90.4	OXIDE
	95	6.44	6.88	0.57		91.7	45m deep & mined
PGRC080	98	3.58	3.18	0.49		84.6	FRESH \ Transitional ?
	98	3.58	3.91	0.39		90	110m deep & insitu
	150	3.58	3.48		0.29	91.7	Just below Fresh boundary
	106	3.58	3.48		0.19	94.5	
	75	3.58	3.37		0.15	95.5	
	53	3.58	4.01		0.12	97	
PGRC081	100	2.9	2.52	0.37		85.3	OXIDE
	100	2.9	2.66	0.36		86.5	30 metre deep
	75	2.9	2.9		0.06	97.9	MINED
	53	2.9	2.81		0.05	98.2	

The assumed Molech recovery rate of 90% for processing fresh rock is based on the test work from PGRC080. Further metallurgical test work is scheduled as a part of future drilling campaigns.

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Banjo Gold Deposit

The updated Banjo Mineral Resource estimate returned:

- below the historic pit shell using A$2,700 per gold ounce and within the A$2,700 underground stope optimisation a Mineral Resource of 140 kt grading 3.4 g/t gold for 15 kozs.

This represents a 31% increase in grade and a 69% decrease in tonnes and 60% decrease in ounces when compared to the historic resource estimate.

Table 9 - Mineral Resource estimates for the Banjo Gold Deposit as of 30 June 2023, part of the Central Tanami Project in the Northern Territory

	COG (g/t Au)	Measured			Indicated			Inferred			Total		
		Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)
Banjo Gold Deposit													
UG	SO @ 1.80	-	-	-	120	3.6	13	23	2.2	2	140	3.4	15
Total		-	-	-	**120**	**3.6**	**13**	**23**	**2.2**	**2**	**140**	**3.4**	**15**

Banjo was subject to open-pit mining by Otter between June 1999 and April 2001, with 100 kt mined at a reconciled grade of 2.5 g/t gold for 8.3 kozs of gold.

- ***Geology and Geological Interpretation***

The Banjo deposit is hosted by sandstone, mudstone, chert and basalt from the Mt Charles Formation.

Geological interpretations suggest that the basalt and sediments are striking about 272° and dipping about -80° south. A 340° trending shear transects the local stratigraphy and has been described as being approximately 40 metres wide.

Gold mineralisation at the Banjo deposit is hosted by the 340° trending shear that occurs near the contact of the basalt and sedimentary units. These units are striking at 272° and dipping -80° south. Mineralisation has been described as being associated with intense silicification and pyrite. The best grades were located within the sedimentary units and only low-grade pods were encountered in the basalt. Mining within the Banjo open pit concentrated on a north plunging lens of gold mineralisation.

The overall strike of the gold mineralisation within the model is of the order of 860 metres. Bedrock mineralisation is steeply dipping with many lenses vertical. There are four small supergene flat lying lenses. The steep dipping lenses have strike lengths and down dip extents of up to 100 metres but typically they are shorter. True thickness varies from 1-2 metres to 7-8 metres.

- ***Drilling Techniques***

The various prospects on the Molech tenement, MLS180 were sampled using DDH, RC, AC, RB and WB drill holes, as well as DW trench lines, with drilling completed by various owners from 1994 through to 2014.

136 RC and 2 DDH drill holes were used to interpret and model the Banjo deposit.

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Table 10 – Summary of Molech (MLS180) Drilling and in the Banjo Resource Model

In Molech Database			In Banjo Resource Model	
Hole Type	**No. Holes**	**Metres drilled**	**No. Holes**	**Intersection Metres**
AC	158	13753		
DDH	17	2639.37	2	17
DW	3113	118578.9		
RB	1112	56955		
RC	1947	124001.2	136	1371
SL_RC	12	320		
WB	24	1764		
Grand Total	**6383**	**318,011**	**138**	**1388**

- ***Sampling and Sub-Sampling Techniques***

For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Historically, where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken.

For drillholes completed by Tanami Gold, all samples were taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site.

All diamond drill holes drilled from 1990s to 2011 were photographed and half core assayed in 1 metre intervals with the remainder retained for future reference. Core is stored in racks or on pallets at the core yard located at the old exploration camp, approximately 5km to the south of the Central Tanami Mill Site.

- ***Sample Analysis Method***

During mining operations (1990s to 2001) under Otter, drill samples were analysed offsite at ALS Alice Springs, however with the availability of the onsite laboratory, the database does include some onsite analysis. There was no fixed procedure for selecting onsite or offsite analysis, rather the choice was governed by onsite laboratory availability. Analysis (both onsite and offsite) was by AAS with selective Fire Assay checks. It should be noted that all onsite analysis was performed with a 20ml aliquot whereas ALS use a 50ml aliquot for all AAS readings.

The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff.

Tanami Gold (2010 – 2012) sent samples to the Genalysis Laboratory in Alice Springs for analysis by 50g Fire Assay with Atomic Absorption finish (FA50/AA). No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.

- ***Estimation Methodology***

Geology and mineralisation interpretations were prepared by MJM in Surpac software. A low grade cut-off of 0.5 g/t gold was used for gold mineralisation wireframes, but some lower values have been incorporated to enhance the continuity. Geology interpretations were prepared from drill hole and aeromagnetic data. Major structural features were interpreted from the geophysics to guide the geology and mineralisation interpretations.

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The Banjo mineralisation wireframes were validated in Surpac to form 3DM. The gold envelopes were modelled into a total of 31 individual domains or lodes, with mineralisation classified into 2 categories, sediment / basalt or laterite hosted.

The wireframes of the mineralised zones were used to code the database to allow identification of the resource intersections. Surpac software was then used to extract down hole composites within the different resource domains. All holes were composited to 1m as 99% of the sampling was at 1m intervals. Individual composite files were created for each of the domains in the wireframe models and summary statistics determined.

Analysis of statistics and histogram plots for all lodes suggested that high grade cuts were required for 4 lodes. A high grade cut of 7.5 to 25 g/t gold was applied to some of the lodes for gold. This resulted in a total of 29 composites being cut or 2.1% of the data. The high-grade cuts were applied to the composite data prior to grade estimation.

Mineralisation continuity was examined via variography to determine the appropriate kriging parameters for estimation. All variography was completed using Supervisor software.

A block model was created using Surpac software to encompass the full extent of the deposit. The block model used a primary block size of 10m NS by 5m EW by 5m RL with sub-blocking to 2.5m by 1.25m by 1.25m. The parent block size was selected based on approximately half the average drill spacing of RC drilling in the well drilled areas, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.

OK grade interpolation was used to estimate gold values in the Banjo block model using the nugget, sill values and ranges determined from the variogram models. For all zones in the block model, the wireframe interpretations were used as hard boundaries in the interpolation. That is, only grades inside each lode were used to interpolate the blocks inside the lode.

An orientated ‘ellipsoid’ search was used to select data for interpolation. The ellipsoid was oriented to the average strike and dip of the mineralised zones.

Search ellipses and the minimum and maximum number of samples were lode dependent. A first pass search radius of 25 to 30 metres with a minimum number of samples of 6 samples and a second pass radius of 50 to 60 metres with a minimum number of 6 samples were used. A third pass search radius of 100-120m was used with 4 samples to ensure all blocks within the mineralised lodes were estimated. The maximum number of samples ranged from 10 to 18 depending on the number of samples in the domain.

Table 11 - Banjo Interpolation Parameters

Parameter	Pass 1	Pass 2	Pass 3
Search Type	Ellipsoid	Ellipsoid	Ellipsoid
Bearing	315° to 350°		
Dip	0° to 90°		
Plunge	-49.7° to 15°		
Major-Semi Major Ratio	1.0 to 3.0		
Major-Minor Ratio	3.0 to 5.0		
Search Radius	25-30	50-60	100-120
Minimum Samples	6	6	4
Maximum Samples	10 to 18	10 to 18	10 to 18
Max. Sam. per Hole	4	4	3
Block Discretisation	1 X by 2 Y by 1 Z		
Percentage Blocks Filled	60%	35%	5%

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Bulk density was applied by RL over 20 metre increments using average bulk density measurements for basalt and sediment and then compensating for oxide and transitional material. A listing of bulk density levels applied is provided in Table 5.

- ***Cut-off Grades***

The Mineral Resource estimate has been constrained by the wireframed mineralised envelopes, is undiluted by external waste and reported above a 0.65 g/t gold cut-off grade for open pit material within a $AU2700 pit shell. The underground resource is reported within a $AU2700 optimised stope and is undiluted by waste.

The 0.65 g/t gold breakeven in-situ cut-off for the open-pit Mineral Resource estimate was based on the Whittle assumptions provided in Table 6. The Whittle assumptions have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory.

A 1.8 g/t gold breakeven in-situ cut-off for the underground Mineral Resource estimate was based on the Optimiser Assumptions provided in Table 7. These have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory

- ***Classification Criteria***

The Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. No Measured Resource was categorised due to no actual bulk density data, no QAQC data, open pits finishing early due to geotechnical issues, water ingress and loss of the detailed mining history. The Indicated Mineral Resource was defined within areas of RC and diamond drilling of 25 by 25 metre, where the continuity and predictability of the lode positions was good, and the estimation had reasonable slopes of regression. The Inferred Mineral Resource was assigned to areas where support for the continuity of mineralisation was limited by wider spaced drilling or insufficient drilling in smaller lodes. The minimum requirement for an inferred resource is 3 drill holes spaced apart so that strike and dip can be determined.

- ***Mining, Metallurgy and Other Modifying Factors***

Mining

Whittle and Stope Optimisations were carried out as part of the Mineral Resource estimate process. The Whittle and Stope Optimisation assumptions have been derived from Northern Star benchmarks and studies and factored to reflect costs in the Northern Territory. These are provided in Tables 6 and 7.

Metallurgy

The process recovery levels obtained from test work undertaken on samples from Beaver have been applied to all deposits in the Molech area, noting that they may not be fully representative. Refer to Table 8.

Bonsai Gold Deposit

The updated Bonsai estimate returned:

- within the optimised pit shell, using A$2,700 per gold ounce, at a reporting cut-off grade of 0.65 g/t gold a Mineral Resource of 140 kt grading 2.2 g/t gold for 10 kozs; and

- below the optimised pit shell using A$2,700 per gold ounce and within the A$2,700 underground stope optimisation a Mineral Resource of 81 kt grading 2.6 g/t gold for 7 kozs.

The combined total of 220 kt grading 2.4 g/t gold for 17 kozs represents a 7% increase in grade and a 53% decrease in tonnes and 50% decrease in ounces when compared to the historic resource estimate.

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Table 12 - Mineral Resource estimates for the Bonsai Gold Deposit as of 30 June 2023, part of the Central Tanami Project in the Northern Territory

	COG (g/t Au)	Measured			Indicated			Inferred			Total		
		Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)
Bonsai Gold Deposit													
OP	0.65	-	-	-	110	2.1	8	25	2.8	2	140	2.2	10
UG	SO @ 1.80	-	-	-	9	2.1	1	73	2.7	6	81	2.6	7
Total		-	-	-	**120**	**2.1**	**8**	**98**	**2.7**	**9**	**220**	**2.4**	**17**

Bonsai was subject to open-pit mining by Otter between June 1999 and June 2001, with 160 kt mined at a reconciled grade of 2.0 g/t gold for 10 kozs of gold.

- ***Geology and Geological Interpretation***

The Bonsai deposit is hosted within a 290° trending shear zone that transect basalt and interbedded siltstone and sandstone from the Mt Charles formation. Geological interpretations suggest that the basalt and sediments are striking about 280° to 335°, dipping steeply and display several fault offsets.

Near surface mineralisation at Bonsai consists of laterite or supergene gold mineralisation. Very few descriptions of this material have survived, and it has been largely mined. The strike of the supergene was about 200 metres with a width of 20 metres and a true thickness of up to 3 metres.

The bedrock mineralisation at the Bonsai deposit is hosted by sheared basalt and to a lesser degree within the margins of the sheared basalt / sediment contact within the 290° trending shear zone, with better grades associated with silicification, quartz stockwork and veins.

Modelling of the gold at a 0.5 g/t Au low grade cut off shows that mineralisation has been defined over a strike length of 810 metres in a zone that is up to 120 metres wide. The mineralisation is discontinuous and many of the lodes have an apparent southeast plunge. Strike lengths vary between 20 to 300 metres. The steeply dipping lodes have limited down dip extents and vary from 20 to 130 metres with true thickness of 1-2 metres to 7-8 metres.

- ***Drilling Techniques***

The various prospects on the Molech tenement, MLS180 were sampled using DDH, RC, AC, RB and WB drill holes, as well as DW trench lines, with drilling completed by various owners from 1994 through to 2014. 199 RC and 4 DDH drill holes were used to interpret and model the Bonsai deposit.

Table 13 – Summary of Molech (MLS180) Drilling and in the Bonsai Resource Model

In Molech Database			In Bonsai Resource Model	
Hole Type	**No. Holes**	**Metres drilled**	**No. Holes**	**Intersection Metres**
AC	158	13753		
DDH	17	2639.37	4	13.6
DW	3113	118578.9		
RB	1112	56955		
RC	1947	124001.2	199	1516.9
SL_RC	12	320		
WB	24	1764		
Grand Total	**6383**	**318,011**	**203**	**1530.5**

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- ***Sampling and Sub-Sampling Techniques***

For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Historically, where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken.

For drillholes completed by Tanami Gold, all samples were taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site.

All diamond drill holes drilled from 1990s to 2011 were photographed and half core assayed in 1 metre intervals with the remainder retained for future reference. Core is stored in racks or on pallets at the core yard located at the old exploration camp, approximately 5km to the south of the Central Tanami Mill Site.

- ***Sample Analysis Method***

During mining operations (1990s to 2001) under Otter, drill samples were analysed offsite at ALS Alice Springs, however with the availability of the onsite laboratory, the database does include some onsite analysis. There was no fixed procedure for selecting onsite or offsite analysis, rather the choice was governed by onsite laboratory availability. Analysis (both onsite and offsite) was by AAS with selective Fire Assay checks. It should be noted that all onsite analysis was performed with a 20ml aliquot whereas ALS use a 50ml aliquot for all AAS readings.

The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff.

Tanami Gold (2010 – 2012) sent samples to the Genalysis Laboratory in Alice Springs for analysis by 50g Fire Assay with Atomic Absorption finish (FA50/AA). No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.

- ***Estimation Methodology***

Geology and mineralisation interpretations were prepared by MJM in Surpac software. A low grade cut-off of 0.5 g/t gold was used for gold mineralisation wireframes, but some lower values have been incorporated to enhance the continuity. Geology interpretations were prepared from drill hole and aeromagnetic data. Major structural features were interpreted from the geophysics to guide the geology and mineralisation interpretations.

The Bonsai mineralisation wireframes were validated in Surpac to form 3DM. The gold envelopes were modelled into a total of 31 individual domains or lodes, with mineralisation classified into 2 categories, sediment / basalt or laterite hosted.

The wireframes of the mineralised zones were used to code the database to allow identification of the resource intersections. Surpac software was then used to extract down hole composites within the different resource domains. All holes were composited to 1m as 99% of the sampling was at 1m intervals. Individual composite files were created for each of the domains in the wireframe models and summary statistics determined.

Analysis of statistics and histogram plots for all lodes suggested that high grade cuts were required for 10 lodes. A high grade cut of 6 to 14 g/t gold was applied to some of the lodes for gold. This resulted in a total of 39 composites being cut or 2.5% of the data. The high-grade cuts were applied to the composite data prior to grade estimation.



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Mineralisation continuity was examined via variography to determine the appropriate kriging parameters for estimation. All variography was completed using Supervisor software.

A block model was created using Surpac software to encompass the full extent of the deposit. The block model used a primary block size of 10m NS by 5m EW by 5m RL with sub-blocking to 2.5m by 1.25m by 1.25m. The parent block size was selected based on approximately half the average drill spacing of RC drilling in the well drilled areas, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.

OK grade interpolation was used to estimate gold values in the Bonsai block model using the nugget, sill values and ranges determined from the variogram models. For all zones in the block model, the wireframe interpretations were used as hard boundaries in the interpolation. That is, only grades inside each lode were used to interpolate the blocks inside the lode.

An orientated 'ellipsoid' search was used to select data for interpolation. The ellipsoid was oriented to the average strike and dip of the mineralised zones.

Search ellipses and the minimum and maximum number of samples were lode dependent. A first pass search radius of 25 to 50 metres with a minimum number of samples of 2 to 6 samples and a second pass radius of 50 to 100 metres with a minimum number of 2 to 6 samples were used. A third pass search radius of 100-200m was used with 2 to 4 samples to ensure all blocks within the mineralised lodes were estimated. The maximum number of samples ranged from 3 to 24 depending on the number of samples in the domain.

Table 14 - Bonsai Interpolation Parameters

Parameter	Pass 1	Pass 2	Pass 3
Search Type	Ellipsoid	Ellipsoid	Ellipsoid
Bearing	303.6° to 150°		
Dip	0° to 90°		
Plunge	-15° to 15°		
Major-Semi Major Ratio	1.3 to 3.0		
Major-Minor Ratio	3.0 to 10.0		
Search Radius	25-50	50-100	100-200
Minimum Samples	2 to 6	2 to 6	2 to 4
Maximum Samples	3 to 24	3 to 24	3 to 24
Max. Sam. per Hole	3 to 4	3 to 4	3
Block Discretisation	1 X by 2 Y by 1 Z		
Percentage Blocks Filled	46%	42%	11%

Bulk density was applied by RL over 20 metre increments using average bulk density measurements for basalt and sediment and then compensating for oxide and transitional material. A listing of bulk density levels applied is provided in Table 5.

- ***Cut-off Grades***

The Mineral Resource estimate has been constrained by the wireframed mineralised envelopes, is undiluted by external waste and reported above a 0.65 g/t gold cut-off grade for open pit material within a $AU2700 pit shell. The underground resource is reported within a $AU2700 optimised stope and is undiluted by waste.

The 0.65 g/t gold breakeven in-situ cut-off for the open-pit Mineral Resource estimate was based on the Whittle assumptions provided in Table 6. The Whittle assumptions have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory.



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A 1.8 g/t gold breakeven in-situ cut-off for the underground Mineral Resource estimate was based on the Optimiser Assumptions provided in Table 7. These have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory

- ***Classification Criteria***

The Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. No Measured Resource was categorised due to no actual bulk density data, no QAQC data, open pits finishing early due to geotechnical issues, water ingress and loss of the detailed mining history. The Indicated Mineral Resource was defined within areas of RC and diamond drilling of 25 by 25 metre, where the continuity and predictability of the lode positions was good, and the estimation had reasonable slopes of regression. The Inferred Mineral Resource was assigned to areas where support for the continuity of mineralisation was limited by wider spaced drilling or insufficient drilling in smaller lodes. The minimum requirement for an inferred resource is 3 drill holes spaced apart so that strike and dip can be determined.

- ***Mining, Metallurgy and Other Modifying Factors***

Mining

Whittle and Stope Optimisations were carried out as part of the Mineral Resource estimate process. The Whittle and Stope Optimisation assumptions have been derived from Northern Star benchmarks and studies and factored to reflect costs in the Northern Territory. These are provided in Tables 6 and 7.

Metallurgy

The process recovery levels obtained from test work undertaken on samples from Beaver have been applied to all deposits in the Molech area, noting that they may not be fully representative. Refer to Table 8.

Orion Gold Deposit

The updated Orion estimate returned:

- within the optimised pit shell, using A$2,700 per gold ounce, at a reporting cut-off grade of 0.65 g/t gold a Mineral Resource of 47 kt grading 3.6 g/t gold for 5 kozs; and

- below the optimised pit shell using A$2,700 per gold ounce and within the A$2,700 underground stope optimisation a Mineral Resource of 43 kt grading 2.4 g/t gold for 3 kozs.

The combined total of 91 kt grading 3.0 g/t gold for 8.8 kozs represents a 12% increase in grade and a 56% decrease in tonnes and 51% decrease in ounces when compared to the historic resource estimate.



Table 15 - Mineral Resource estimates for the Orion Gold Deposit as of 30 June 2023, part of the Central Tanami Project in the Northern Territory

	COG (g/t Au)	Measured			Indicated			Inferred				Total		
		Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)		Tonnes (kt)	Gold (g/t)	Ounces (kozs)
Orion Gold Deposit														
OP	0.65	-	-	-	39	3.1	4	9	5.7	2		47	3.6	5
UG	SO @ 1.80	-	-	-	27	2.3	2	17	2.6	1		43	2.4	3
Total		-	-	-	**65**	**2.8**	**6**	**25**	**3.7**	**3**		**91**	**3.0**	**9**

Orion was subject to open-pit mining by Otter between June 1999 and June 2001, with 100 kt mined at a reconciled grade of 2.7 g/t gold for 8.6 kozs of gold from the larger northern open-pit and 17kt at a reconciled grade of 3.7 g/t gold for 2.0 kozs of gold from the southern open-pit.

- ***Geology and Geological Interpretation***

The Orion North and South deposits are hosted by a 40 metre wide regional shear near the contact of basalt and sedimentary units, which generally trends between 325° to 340° and is interpreted to be the same structure that hosts Banjo in the south and Cheeseman in the north. The local geology consists of siltstone, sandstone, and basalt with minor felsic units.

Basalt outside of the shear strikes at about 330° and has an apparent steep dip and is 50 to 60 metres thick. Basalt within the shear is discontinuous and is up to 15 to 20 metres thick and steeply dipping. own in

Mineralisation at Orion North strikes at between 325° to 335° and dips -80° East but smaller lodes do vary. Individual lodes vary in strike length from 10 to 170 metres and have true thickness from 1-2 to 10 metres. The down dip extent varies from 10 to 100 metres. There is minor supergene mineralisation. The Orion North mineralisation occurs in an inflexion in the shear. High grade gold zones are associated with increasing quartz veins and stockworks within a bleached and silicified basalt.

Gold mineralisation at Orion South strikes at about 330°, dips steeply and has an apparent plunge to the south. Strike lengths vary between 10 and 80 metres and have true thickness from 1-2 to 9 metres. The down dip extent varies from 10 to 60 metres. Orion South gold mineralisation is hosted by sedimentary units.

- ***Drilling Techniques***

The various prospects on the Molech tenement, MLS180 were sampled using DDH, RC, AC, RB and WB drill holes, as well as DW trench lines, with drilling completed by various owners from 1994 through to 2014.

137 RC drill holes were used to interpret and model the Orion deposit.

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Table 16 – Summary of Molech (MLS180) Drilling and in the Orion Resource Model

In Molech Database			In Orion Resource Model	
Hole Type	**No. Holes**	**Metres drilled**	**No. Holes**	**Intersection Metres**
AC	158	13753		
DD	17	2639.37		
DW	3113	118578.9		
RB	1112	56955		
RC	1947	124001.2	137	909
SL_RC	12	320		
WB	24	1764		
Grand Total	**6383**	**318,011**	**137**	**909**

- ***Sampling and Sub-Sampling Techniques***

For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Historically, where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken.

For drillholes completed by Tanami Gold, all samples were taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site.

All diamond drill holes drilled from 1990s to 2011 were photographed and half core assayed in 1 metre intervals with the remainder retained for future reference. Core is stored in racks or on pallets at the core yard located at the old exploration camp, approximately 5km to the south of the Central Tanami Mill Site.

- ***Sample Analysis Method***

During mining operations (1990s to 2001) under Otter, drill samples were analysed offsite at ALS Alice Springs, however with the availability of the onsite laboratory, the database does include some onsite analysis. There was no fixed procedure for selecting onsite or offsite analysis, rather the choice was governed by onsite laboratory availability. Analysis (both onsite and offsite) was by AAS with selective Fire Assay checks. It should be noted that all onsite analysis was performed with a 20ml aliquot whereas ALS use a 50ml aliquot for all AAS readings.

The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff.

Tanami Gold (2010 – 2012) sent samples to the Genalysis Laboratory in Alice Springs for analysis by 50g Fire Assay with Atomic Absorption finish (FA50/AA). No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.

- ***Estimation Methodology***

Geology and mineralisation interpretations were prepared by MJM in Surpac software. A low grade cut-off of 0.5 g/t gold was used for gold mineralisation wireframes, but some lower values have been incorporated to enhance the continuity. Geology interpretations were prepared from drill hole and aeromagnetic data. Major structural features were interpreted from the geophysics to guide the geology and mineralisation interpretations.

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The Orion mineralisation wireframes were validated in Surpac to form 3DM. The gold envelopes were modelled into a total of 27 individual domains or lodes, with mineralisation classified into 2 categories, sediment / basalt or laterite hosted.

The wireframes of the mineralised zones were used to code the database to allow identification of the resource intersections. Surpac software was then used to extract down hole composites within the different resource domains. All holes were composited to 1m as 99% of the sampling was at 1m intervals. Individual composite files were created for each of the domains in the wireframe models and summary statistics determined.

Analysis of statistics and histogram plots for all lodes suggested that high grade cuts were required for 9 lodes. A high grade cut of 8 to 22 g/t gold was applied to some of the lodes for gold. This resulted in a total of 47 composites being cut or 5.4% of the data. The high-grade cuts were applied to the composite data prior to grade estimation.

Mineralisation continuity was examined via variography to determine the appropriate kriging parameters for estimation. All variography was completed using Supervisor software.

A block model was created using Surpac software to encompass the full extent of the deposit. The block model used a primary block size of 10m NS by 5m EW by 5m RL with sub-blocking to 2.5m by 1.25m by 1.25m. The parent block size was selected based on approximately half the average drill spacing of RC drilling in the well drilled areas, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.

OK grade interpolation was used to estimate gold values in the Orion block model using the nugget, sill values and ranges determined from the variogram models. For all zones in the block model, the wireframe interpretations were used as hard boundaries in the interpolation. That is, only grades inside each lode were used to interpolate the blocks inside the lode.

An orientated ‘ellipsoid’ search was used to select data for interpolation. The ellipsoid was oriented to the average strike and dip of the mineralised zones.

Search ellipses and the minimum and maximum number of samples were lode dependent. A first pass search radius of 20 to 30 metres with a minimum number of samples of 2 to 6 samples and a second pass radius of 40 to 60 metres with a minimum number of 2 to 6 samples were used. A third pass search radius of 80-120m was used with 2 to 4 samples to ensure all blocks within the mineralised lodes were estimated. The maximum number of samples ranged from 6 to 30 depending on the number of samples in the domain.

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Table 17 - Orion Interpolation Parameters

Parameter	Pass 1	Pass 2	Pass 3
Search Type	Ellipsoid	Ellipsoid	Ellipsoid
Bearing	320° to 345°		
Dip	0° to 90°		
Plunge	-4.98° to 30°		
Major-Semi Major Ratio	1.2 to 3.30		
Major-Minor Ratio	1.7 to 5.00		
Search Radius	20-30	40-60	80-120
Minimum Samples	2 to 6	2 to 6	2 to 4
Maximum Samples	6 to 30	6 to 30	6 to 30
Max. Sam. per Hole	3 to 4	3 to 4	3
Block Discretisation	1 X by 2 Y by 1 Z		
Percentage Blocks Filled	32%	47%	19%

Bulk density was applied by RL over 20 metre increments using average bulk density measurements for basalt and sediment and then compensating for oxide and transitional material. A listing of bulk density levels applied is provided in Table 5.

- ***Cut-off Grades***

The Mineral Resource estimate has been constrained by the wireframed mineralised envelopes, is undiluted by external waste and reported above a 0.65 g/t gold cut-off grade for open pit material within a $AU2700 pit shell. The underground resource is reported within a $AU2700 optimised stope and is undiluted by waste.

The 0.65 g/t gold breakeven in-situ cut-off for the open-pit Mineral Resource estimate was based on the Whittle assumptions provided in Table 6. The Whittle assumptions have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory.

A 1.8 g/t gold breakeven in-situ cut-off for the underground Mineral Resource estimate was based on the Optimiser Assumptions provided in Table 7. These have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory

- ***Classification Criteria***

The Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. No Measured Resource was categorised due to no actual bulk density data, no QAQC data, open pits finishing early due to geotechnical issues, water ingress and loss of the detailed mining history. The Indicated Mineral Resource was defined within areas of RC and diamond drilling of 25 by 25 metre, where the continuity and predictability of the lode positions was good, and the estimation had reasonable slopes of regression. The Inferred Mineral Resource was assigned to areas where support for the continuity of mineralisation was limited by wider spaced drilling or insufficient drilling in smaller lodes. The minimum requirement for an inferred resource is 3 drill holes spaced apart so that strike and dip can be determined.

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- ***Mining, Metallurgy and Other Modifying Factors***

Mining

Whittle and Stope Optimisations were carried out as part of the Mineral Resource estimate process. The Whittle and Stope Optimisation assumptions have been derived from Northern Star benchmarks and studies and factored to reflect costs in the Northern Territory. These are provided in Tables 6 and 7.

Metallurgy

The process recovery levels obtained from test work undertaken on samples from Beaver have been applied to all deposits in the Molech area, noting that they may not be fully representative. Refer to Table 8.

Cheeseman Gold Deposit

The updated Cheeseman estimate returned:

- within the optimised pit shell, using A$2,700 per gold ounce, at a reporting cut-off grade of 0.65 g/t gold a Mineral Resource of 19 kt grading 3.7 g/t gold for 2 kozs; and
- below the optimised pit shell using A$2,700 per gold ounce and within the A$2,700 underground stope optimisation a Mineral Resource of 50 kt grading 3.5 g/t gold for 6 kozs.

The combined total of 69 kt grading 3.6 g/t gold for 8.0 kozs represents a 6% increase in grade and a 49% decrease in tonnes and 46% decrease in ounces when compared to the historic resource estimate.

Table 18 - Mineral Resource estimates for the Cheeseman Gold Deposit as of 30 June 2023, part of the Central Tanami Project in the Northern Territory

	COG (g/t Au)	Measured			Indicated			Inferred			Total		
		Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)
Cheeseman Gold Deposit													
OP	0.65	-	-	-	11	4.8	2	8	2.3	1	19	3.7	2
UG	SO @ 1.80	-	-	-	-	-	-	50	3.5	6	50	3.5	6
Total		-	-	-	**11**	**4.8**	**2**	**59**	**3.4**	**6**	**69**	**3.6**	**8**

Cheeseman was subject to open-pit mining by Otter between June 1999 and June 2001, with 59 kt mined at a reconciled grade of 3.9 g/t gold for 7.4 kozs of gold. Most of the production ore was derived from an enriched laterite cap directly above a high-grade quartz vein. The pit was mined down to a bleached, silty – talc material with high grade gold associated with ferruginous nodules.

- ***Geology and Geological Interpretation***

The Cheeseman deposit is hosted by regional shear that generally trends at about 340°. In the Cheeseman area there is an apparent inflection in this zone where the shear changes from about 330° to 320°. The host rocks consist of basalt and siltstone and sandstone. Interpreted basalt outside of the shear has an apparent strike of between 1° to 20° and is steeply dipping. Within the shear the basalt has an apparent strike that is parallel to the shear zone.

An intact regolith profile was encountered in the Cheeseman deposit and the near surface mineralisation consisted of laterite or supergene hosted gold. The mineralisation in the supergene is flat lying and has a strike length of up to 75 metres and a width between 5 to 45 metres and a true thickness of 1 to 8 metres. The strike of the southernmost supergene lodes is between 335° to 340° whilst the northern supergene lodes strike between 315° to 330° and are much smaller in size.

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Primary gold mineralisation consists of south plunging auriferous quartz veins hosted by sandstones and siltstones. There is a spatial relationship between the mineralisation and the contacts between the sediment and basalt. The strike of the veins ranges from 30 to 100 metres whilst the dip extent ranges from 25 to 80 metres. The true thickness of the veins is generally 1 to 2 metres but can be up to 8 metres. The quartz veins south of 7794850mN strike at about 330° whilst the veins north of this strike between 315° and 325°.

- ***Drilling Techniques***

The various prospects on the Molech tenement, MLS180 were sampled using DDH, RC, AC, RB and WB drill holes, as well as DW trench lines, with drilling completed by various owners from 1994 through to 2014.

79 RC drill holes were used to interpret and model the Orion deposit.

Table 19 – Summary of Molech (MLS180) Drilling and in the Cheeseman Resource Model

In Molech Database			In Cheeseman Resource Model	
Hole Type	**No. Holes**	**Metres drilled**	**No. Holes**	**Intersection Metres**
AC	158	13753		
DD	17	2639.37		
DW	3113	118578.9		
RB	1112	56955		
RC	1947	124001.2	79	572
SL_RC	12	320		
WB	24	1764		
Grand Total	**6383**	**318,011**	**79**	**572**

- ***Sampling and Sub-Sampling Techniques***

For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Historically, where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken.

For drillholes completed by Tanami Gold, all samples were taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site.

All diamond drill holes drilled from 1990s to 2011 were photographed and half core assayed in 1 metre intervals with the remainder retained for future reference. Core is stored in racks or on pallets at the core yard located at the old exploration camp, approximately 5km to the south of the Central Tanami Mill Site.

- ***Sample Analysis Method***

During mining operations (1990s to 2001) under Otter, drill samples were analysed offsite at ALS Alice Springs, however with the availability of the onsite laboratory, the database does include some onsite analysis. There was no fixed procedure for selecting onsite or offsite analysis, rather the choice was governed by onsite laboratory availability. Analysis (both onsite and offsite) was by AAS with selective Fire Assay checks. It should be noted that all onsite analysis was performed with a 20ml aliquot whereas ALS use a 50ml aliquot for all AAS readings.



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The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff.

Tanami Gold (2010 – 2012) sent samples to the Genalysis Laboratory in Alice Springs for analysis by 50g Fire Assay with Atomic Absorption finish (FA50/AA). No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.

- ***Estimation Methodology***

Geology and mineralisation interpretations were prepared by MJM in Surpac software. A low grade cut-off of 0.5 g/t gold was used for gold mineralisation wireframes, but some lower values have been incorporated to enhance the continuity. Geology interpretations were prepared from drill hole and aeromagnetic data. Major structural features were interpreted from the geophysics to guide the geology and mineralisation interpretations.

The Cheeseman mineralisation wireframes were validated in Surpac to form 3DM. The gold envelopes were modelled into a total of 19 individual domains or lodes, with mineralisation classified into 2 categories, sediment / basalt or laterite hosted.

The wireframes of the mineralised zones were used to code the database to allow identification of the resource intersections. Surpac software was then used to extract down hole composites within the different resource domains. All holes were composited to 1m as 99% of the sampling was at 1m intervals. Individual composite files were created for each of the domains in the wireframe models and summary statistics determined.

Analysis of statistics and histogram plots for all lodes suggested that high grade cuts were required for 9 lodes. A high grade cut of 5 to 25 g/t gold was applied to some of the lodes for gold. This resulted in a total of 27 composites being cut or 4.7% of the data. The high-grade cuts were applied to the composite data prior to grade estimation.

Mineralisation continuity was examined via variography to determine the appropriate kriging parameters for estimation. All variography was completed using Supervisor software.

A block model was created using Surpac software to encompass the full extent of the deposit. The block model used a primary block size of 10m NS by 5m EW by 5m RL with sub-blocking to 2.5m by 1.25m by 1.25m. The parent block size was selected based on approximately half the average drill spacing of RC drilling in the well drilled areas, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.

OK grade interpolation was used to estimate gold values in the Cheeseman block model using the nugget, sill values and ranges determined from the variogram models. For all zones in the block model, the wireframe interpretations were used as hard boundaries in the interpolation. That is, only grades inside each lode were used to interpolate the blocks inside the lode.

An orientated ‘ellipsoid’ search was used to select data for interpolation. The ellipsoid was oriented to the average strike and dip of the mineralised zones.

Search ellipses and the minimum and maximum number of samples were lode dependent. A first pass search radius of 20 to 30 metres with a minimum number of samples of 3 to 6 samples and a second pass radius of 40 to 60 metres with a minimum number of 3 to 6 samples were used. A third pass search radius of 80-120m was used with 3 to 4 samples to ensure all blocks within the mineralised lodes were estimated. The maximum number of samples ranged from 8 to 24 depending on the number of samples in the domain.



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Table 20 – Cheeseman Interpolation Parameters

Parameter	Pass 1	Pass 2	Pass 3
Search Type	Ellipsoid	Ellipsoid	Ellipsoid
Bearing	315° to 345.9°		
Dip	0° to 90°		
Plunge	0° to 30°		
Major-Semi Major Ratio	1.5 to 4.69		
Major-Minor Ratio	3.0 to 10.00		
Search Radius	20-30	40-60	80-120
Minimum Samples	3 to 6	3 to 6	3 to 4
Maximum Samples	8 to 24	8 to 24	8 to 24
Max. Sam. per Hole	3 to 4	3 to 4	3
Block Discretisation	1 X by 2 Y by 1 Z		
Percentage Blocks Filled	40%	42%	17%

Bulk density was applied by RL over 20 metre increments using average bulk density measurements for basalt and sediment and then compensating for oxide and transitional material. A listing of bulk density levels applied is provided in Table 5.

- ***Cut-off Grades***

The Mineral Resource estimate has been constrained by the wireframed mineralised envelopes, is undiluted by external waste and reported above a 0.65 g/t gold cut-off grade for open pit material within a $AU2700 pit shell. The underground resource is reported within a $AU2700 optimised stope and is undiluted by waste.

The 0.65 g/t gold breakeven in-situ cut-off for the open-pit Mineral Resource estimate was based on the Whittle assumptions provided in Table 6. The Whittle assumptions have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory.

A 1.8 g/t gold breakeven in-situ cut-off for the underground Mineral Resource estimate was based on the Optimiser Assumptions provided in Table 7. These have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory

- ***Classification Criteria***

The Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. No Measured Resource was categorised due to no actual bulk density data, no QAQC data, open pits finishing early due to geotechnical issues, water ingress and loss of the detailed mining history. The Indicated Mineral Resource was defined within areas of RC and diamond drilling of 25 by 25 metre, where the continuity and predictability of the lode positions was good, and the estimation had reasonable slopes of regression. The Inferred Mineral Resource was assigned to areas where support for the continuity of mineralisation was limited by wider spaced drilling or insufficient drilling in smaller lodes. The minimum requirement for an inferred resource is 3 drill holes spaced apart so that strike and dip can be determined.

- ***Mining, Metallurgy and Other Modifying Factors***

Mining

Whittle and Stope Optimisations were carried out as part of the Mineral Resource estimate process. The Whittle and Stope Optimisation assumptions have been derived from Northern Star benchmarks and studies and factored to reflect costs in the Northern Territory. These are provided in Tables 6 and 7.

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Metallurgy

The process recovery levels obtained from test work undertaken on samples from Beaver have been applied to all deposits in the Molech area, noting that they may not be fully representative. Refer to Table 8.

Pendragon Gold Deposit

A Mineral Resource for Pendragon has previously never been reported returning:

- within the optimised pit shell, using A$2,700 per gold ounce, at a reporting cut-off grade of 0.65 g/t gold a Mineral Resource of 24 kt grading 2.2 g/t gold for 1.7 kozs; and
- below the optimised pit shell using A$2,700 per gold ounce and within the A$2,700 underground stope optimisation a Mineral Resource of 17 kt grading 2.3 g/t gold for 1.3 kozs.

The combined total of 41 kt grading 2.3 g/t gold for 3.0 kozs represents the maiden Mineral Resource estimate for Pendragon.

Table 21 - Mineral Resource estimates for the Pendragon Gold Deposit as of 30 June 2023, part of the Central Tanami Project in the Northern Territory

	COG (g/t Au)	Measured			Indicated			Inferred			Total		
		Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)	Tonnes (kt)	Gold (g/t)	Ounces (kozs)
Pendragon Gold Deposit													
OP	0.65	-	-	-	-	-	-	24	2.2	2	24	2.2	2
UG	SO @ 1.80	-	-	-	-	-	-	17	2.3	1	17	2.3	1
Total		-	-	-	-	-	-	**41**	**2.3**	**3**	**41**	**2.3**	**3**

- ***Geology and Geological Interpretation***

The Pendragon deposit is hosted within a 300° trending shear zone that transect basalt and interbedded siltstone and sandstone from the Mt Charles formation. This appears to be a similar structure to the shear that hosts the Bonsai deposit. Geological interpretations suggest that the basalt and sediments are striking between 300° to 330°.

Gold mineralisation at Pendragon is hosted within a 300° trending shear. The lithology that hosts the mineralisation is mostly sandstones and siltstone with a spatial association with basalt. Strike lengths vary between 50 to 200 metres with true thickness varying from 1-2 to 8 metres and down dip extents from 20 to 90 metres. The strike of individual lenses varies between 300° to 320° and dips are near vertical.

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- ***Drilling Techniques***

The various prospects on the Pendragon lease EL26925 were sampled using RC, AC, RB and WB drill holes and DW trench lines ("DW").

108 RC holes were drilled from 1994 to 2001 at Pendragon by Otter. Tanami Gold drilled 10 RC holes in 2012 to explore for mineralisation intersected in earlier RB and AC holes. 11 RC drill holes were used to interpret and model the Pendragon deposit.

Table 22 – Summary of EL26925 Drilling and in the Pendragon Resource Model

In EL26925 Database			In Pendragon Resource Model	
Hole Type	**No. Holes**	**Metres drilled**	**No. Holes**	**Intersection Metres**
AC	152	13084		
DW	17	2980		
RB	3074	73834		
RC	122	9116	11	85
WB	2	168		
Grand Total	**3367**	**99182**	**11**	**85**

- ***Sampling and Sub-Sampling Techniques***

For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Historically, where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken. The use of booster air systems since mid-1998 overcame this problem.

For Tanami Gold drillholes, all samples are taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site.

All diamond drill holes drilled from 1990s to 2011 were photographed and half core assayed in 1 metre intervals with the remainder retained for future reference. Core is stored in racks or on pallets at the core yard located at the old exploration camp, approximately 5km to the south of the Central Tanami Mill site.

- ***Sample Analysis Method***

During mining operations (1990s to 2001) under Otter, drill samples were analysed offsite at ALS Alice Springs, however with the availability of the onsite laboratory, the database does include some onsite analysis. There was no fixed procedure for selecting onsite or offsite analysis, rather the choice was governed by onsite laboratory availability. Analysis (both onsite and offsite) was by AAS with selective Fire Assay checks. It should be noted that all onsite analysis was performed with a 20ml aliquot whereas ALS use a 50ml aliquot for all AAS readings.

The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff.

Tanami Gold (2010 – 2012) sent samples to the Genalysis Laboratory in Alice Springs for analysis by 50g Fire Assay with Atomic Absorption finish (FA50/AA). No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.



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- ***Estimation Methodology***

Geology and mineralisation interpretations were prepared by MJM in Surpac software. A low grade cut-off of 0.5 g/t gold was used for gold mineralisation wireframes, but some lower values have been incorporated to enhance the continuity. Geology interpretations were prepared from drill hole and aeromagnetic data. Major structural features were interpreted from the geophysics to guide the geology and mineralisation interpretations.

The Pendragon mineralisation wireframes were validated in Surpac to form 3DM. The gold envelopes were modelled into a total of 17 individual domains or lodes, but only 1 to 10 were used in the model.

The wireframes of the mineralised zones were used to code the database to allow identification of the resource intersections. Surpac software was then used to extract down hole composites within the different resource domains. All holes were composited to 1m as 99% of the sampling was at 1m intervals. Individual composite files were created for each of the domains in the wireframe models and summary statistics determined.

Analysis of statistics and histogram plots for all lodes suggested that high grade cuts were not necessary, due to the low number of samples in the domains.

There was insufficient data to calculate variograms for Pendragon.

A block model was created using Surpac software to encompass the full extent of the deposit. The block model used a primary block size of 10m NS by 5m EW by 5m RL with sub-blocking to 2.5m by 1.25m by 1.25m. The parent block size was selected based on approximately half the average drill spacing of RC drilling in the well drilled areas, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction.

Inverse Distance Squared ("ID2") grade interpolation was used to estimate gold values in the Pendragon block model. For all zones in the block model, the wireframe interpretations were used as hard boundaries in the interpolation. That is, only grades inside each lode were used to interpolate the blocks inside the lode.

An orientated 'ellipsoid' search was used to select data for interpolation. The ellipsoid was oriented to the average strike and dip of the mineralised zones.

Search ellipses and the minimum and maximum number of samples were lode dependent. A first pass search radius of 20 to 30 metres with a minimum number of samples of 4 to 6 samples and a second pass radius of 40 to 60 metres with a minimum number of 4 to 6 samples were used. A third pass search radius of 80-120m was used with 3 to 4 samples to ensure all blocks within the mineralised lodes were estimated. The maximum number of samples ranged from 6 to 30 depending on the number of samples in the domain.

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Table 23 – Pendragon Interpolation Parameters

Parameter	Pass 1	Pass 2	Pass 3
Search Type	Ellipsoid	Ellipsoid	Ellipsoid
Bearing	300° to 335°		
Dip	0° to 90°		
Plunge	0° to 10°		
Major-Semi Major Ratio	1.5 to 2.00		
Major-Minor Ratio	2.0 to 5.00		
Search Radius	20-30	40-60	80-120
Minimum Samples	4 to 6	4 to 6	3 to 4
Maximum Samples	7 to 24	6 to 30	6 to 30
Max. Sam. per Hole	3 to 7	3 to 7	3 to 7
Block Discretisation	1 X by 2 Y by 1 Z		
Percentage Blocks Filled	24%	29%	9%

Bulk density was applied by RL over 20 metre increments using average bulk density measurements for basalt and sediment and then compensating for oxide and transitional material. A listing of bulk density levels applied is provided in Table 5.

- ***Cut-off Grades***

The Mineral Resource estimate has been constrained by the wireframed mineralised envelopes, is undiluted by external waste and reported above a 0.65 g/t gold cut-off grade for open pit material within a $AU2700 pit shell. The underground resource is reported within a $AU2700 optimised stope and is undiluted by waste.

The 0.65 g/t gold breakeven in-situ cut-off for the open-pit Mineral Resource estimate was based on the Whittle assumptions provided in Table 6. The Whittle assumptions have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory.

A 1.8 g/t gold breakeven in-situ cut-off for the underground Mineral Resource estimate was based on the Optimiser Assumptions provided in Table 7. These have been derived from Northern Star benchmarks and studies, factored to reflect costs in the Northern Territory

- ***Classification Criteria***

The Mineral Resource was classified as Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. The Inferred Mineral Resource was assigned to areas where support for the continuity of mineralisation was limited by wide spaced drilling. The minimum requirement for an inferred resource is 3 drill holes spaced apart so that strike and dip can be determined.



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- ***Mining, Metallurgy and Other Modifying Factors***

Mining

Whittle and Stope Optimisations were carried out as part of the Mineral Resource estimate process. The Whittle and Stope Optimisation assumptions have been derived from Northern Star benchmarks and studies and factored to reflect costs in the Northern Territory. These are provided in Tables 6 and 7.

Metallurgy

The process recovery levels obtained from test work undertaken on samples from Beaver have been applied to all deposits in the Molech area, noting that they may not be fully representative. Refer to Table 8.

Information on Tanami's projects can be found on the Company's website at https://www.tanami.com.au.

This release has been authorised by the Board of Directors of Tanami Gold NL.

Arthur G Dew
Chairman



Competent Persons Statements

The information in this release that relates to the Mineral Resource estimate of the Beaver Gold Deposit, Banjo Gold Deposit, Bonsai Gold Deposit, Orion Gold Deposit, Cheeseman Gold Deposit and the Pendragon Gold Deposit is based on information compiled by Mr. Graeme Thompson, who is a Member of the Australasian Institute of Mining and Metallurgy, and is an employee of MoJoe Mining Pty Ltd. Mr Graeme Thompson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he has undertaken to qualify as a Competent Person, as defined in the 2012 Edition of the Australasian Code for the Reporting of Mineral Resources and Ore Reserves.

Mr Graeme Thompson has provided written consent approving the inclusion of the Mineral Resource Estimates in the report in the form and context in which they appear.

The information in this report that relates to Exploration Results for the Beaver Gold Deposit, Banjo Gold Deposit, Bonsai Gold Deposit, Orion Gold Deposit, Cheeseman Gold Deposit and the Pendragon Gold Deposit fairly represents information and supporting documentation that was compiled by Mr. Neale Edwards BSc (Hons), a Fellow of the Australian Institute of Geoscientists, who is a Director of the Company and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code of Reporting for Exploration Results, Mineral Resources and Ore Reserves. Mr. Neale Edwards has provided written consent approving the inclusion of the Exploration Results in the report in the form and context in which they appear.

Mr Neale Edwards has provided written consent approving the inclusion of the Exploration Results in the report in the form and context in which they appear.

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Appendix 1 - JORC Table 1
Molech Gold Deposits

Section 1 - Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

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 down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Sampling was completed using reverse circulation (RC) and diamond core (DDH) drilling. Sampling of RC chips was completed on RC drillholes, and half core sampling on diamond drillholes was completed.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	RC metres intervals are defined by paint markings on the rig. The larger split or sample reject is left at the sample pad to indicate metres drilled. DDH core is reconstructed into continuous runs, measured by tape and compared to down hole core blocks consistent with industry practice. All drill core is geologically and geotechnically logged, photographed, with sampling of DDH drillholes was completed using a diamond core saw. Half core was sampled on intervals mostly in 1.0m intervals.
	• *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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Historically, where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken. For drillholes completed by Tanami Gold, all samples were taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site. Core from DDH drilling was collected with a standard tube and orientated where possible using the bottom dead centre technique. Hole deviation surveys were completed on all drill holes but details on the instrument used has not been located. All diamond drill holes drilled from 1990s to 2011 were photographed and half core assayed in 1 metre intervals with the remainder retained for future reference. Core is stored in racks or on pallets at the core yard located at the old exploration camp, approximately 5km to the south of the Central Tanami Mill Site.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, 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 Drilling was completed using a 5.25" face sampling hammer drill bit. Diamond core was completed using a combination of HQ and NQ2 size drill bits.

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Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	DDH core was reconstructed into continuous runs with depths checked against core blocks. Core recoveries were recorded as a percentage and calculated from measured core versus drilled intervals by geologists.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	Experienced RC and DDH drilling contractors were engaged to complete the drilling campaigns. Drilling contractors are supervised and routinely monitored by site geologists.
	• *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 evaluation has been carried to date, to determine if a relationship exists between sample recovery and grade or if bias may have occurred due to preferential loss/gain of fine/coarse material.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	All RC holes were logged by geologists at the drill rig to a high level of detail to support resource estimation and mining studies. RC logging is undertaken on a metre-by-metre basis at the time of drilling. Geologists log DDH core. All relevant features such as lithology, structure, texture, grain size, alteration, oxidation state, vein style and veining percentage per interval, and mineralisation were recorded in the geological logs.
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.*	RC samples were logged for lithology, alteration, mineralisation. Logging was a mix of qualitative and quantitative observations. Visual estimates were made of sulphide, quartz, and alteration as percentages. RC samples were not photographed. All DDH logging was quantitative where possible and qualitative elsewhere. All diamond drill core was photographed.
	• *The total length and percentage of the relevant intersections logged.*	The entire length of each RC and diamond core hole was logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	Diamond drill core was cut in half using a diamond core saw. Half core was sampled mostly on 1.0m intervals.
	• *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*	For RC holes drilled in the 1990s to 2001 samples were taken at 1 metre intervals from the cyclone and manually fed through a riffle splitter. Where wet samples were encountered the entire sample was collected into a 40 litre plastic bucket before being tipped into discrete piles whereupon scoop samples through the spoil pile were taken. For drillholes completed by Tanami Gold, all samples were taken at 1 metre intervals directly from the cone splitter, with the bulk sample collected in green bags and left on site.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	Sample preparation was completed at either external offsite laboratories ALS or Genalysis or at the onsite laboratory facility. The sample preparation methods employed have not been detailed in historic records, but it is assumed that the methods employed by the laboratories, in particular the

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Criteria	JORC Code explanation	Commentary
		known external facilities that the sample preparation process employed would have followed industry standards at that time.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	Selective Fire Assay checks were carried out on samples from both the onsite and external laboratory facilities. The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff. No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.
	• *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.*	Historical records indicate that QAQC processes were carried out, details of the frequency of the inclusion of QAQC samples is not known.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Sample sizes are considered appropriate to represent the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and assay value ranges for gold.
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.*	Analysis pre-2010 (both onsite and offsite) was by AAS with selective Fire Assay checks. It should be noted that all onsite analysis was performed with a 20ml aliquot whereas ALS use a 50ml aliquot for all AAS readings. Tanami Gold (2010 – 2012) sent samples to the Genalysis Laboratory in Alice Springs for analysis by 50g Fire Assay with Atomic Absorption finish (FA50/AA). The analytical methods employed yielded total gold.
	• *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 determine any element concentrations.
	• *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	Selective Fire Assay checks were carried out on samples from both the onsite and external laboratory facilities. The onsite procedure incorporated the inclusion of a check sample, quartz wash and a standard sample per batch of 30 samples. On a monthly basis one pulp per shift (i.e. two per day) was selected and analysed offsite by AAS and Fire Assay for repeatability. Additional check samples were selected and assayed offsite as required by the geological staff.

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Criteria	JORC Code explanation	Commentary
		No data has been located for the QAQC samples submitted during the RC drilling campaigns completed by Tanami Gold.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	All significant intersections were verified by on-site geologists during the drill-hole validation process and later signed off by a Competent Person.
	• *The use of twinned holes.*	No twinned holes were drilled.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*	Historical details of the original importation of primary data is not known. Primary data is now either entered directly or imported into a SQL acQuire database using semi-automated or automated data entry; hard copies of core assays and surveys are stored at site. Assay files are received in .csv format and loaded directly into the SQL acQuire database by geologists or database administrators. Hardcopy and electronic copies of the data is stored for future reference. Visual checks occur as a result of regular use of the data.
	• *Discuss any adjustment to assay data.*	The first (primary) gold assay is almost always utilised for any resource estimation, except where evidence from re-analysis or check analysis dictates.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	During drilling, single-shot surveys were taken every 30m to ensure the hole remains close to the design. Down-hole surveys were performed using Boart Longyear TruCore, Axis Champ Ori, or similar equipment., recording the down-hole dip and magnetic azimuth. These results were then uploaded into the database.
	• *Specification of the grid system used.*	Collar coordinates were recorded in MGA94 Zone 52 for holes drilled between 2010 and 2012. The original holes drilled by Otter Gold Mines from 1990 to 2001 were picked up by site surveyors in either the Molech or Orion grids. These grids were well established and converted to MGA94 zone 52.
	• *Quality and adequacy of topographic control.*	All open pits had been surveyed in either the local Molech or Orion grids. These were converted to MGA94 Zone 52 in Surpac software using parameters established during mining. Topographic control was established using the drill hole collars that were surveyed during mining and converted to MGA94 zone 52.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	Drillhole spacing across the area varies from 20 by 20 metres or closer where grade control drilling has taken to broader spacing of 50 by 50 metres..
	• *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.*	The data spacing and distribution is sufficient to establish geological and/or grade continuity appropriate for the Mineral Resource and classifications to be applied.
	• *Whether sample compositing has been applied.*	No sample compositing was applied. Sample compositing was only undertaken as part of the Mineral Resource estimation process.
	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which*	Drillholes were drilled at an angle that is approximately perpendicular to the orientation of the mineralised trends

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Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	*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.*	No sampling bias is considered to have been introduced by the drilling orientation.
Sample security	• *The measures taken to ensure sample security.*	No historic record has been identified that outlines the measures taken to ensure sample security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	No historic record has been identified that details the results of any audits or reviews of sampling techniques and data.

Section 2 - Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Molech Gold Deposits, Beaver, Orion, Bonsai, Banjo and Cheeseman are located in the Tanami Region in the Northern Territory on Mineral Lease (Southern) 180 ("MLS180"), whilst the Pendragon Gold Deposit is located on Exploration Licence 26925 ("EL26925"). Collectively the deposits are located approximately 36km west of the Central Tanami Mill site. MLS180 covers an area of 803.6ha and EL26925 60 blocks (190.01 km²) and are registered to Northern Star (Tanami) Pty Ltd and Tanami (NT) Pty Ltd. They form part of the 2,211km² Central Tanami Project, a 50/50 Joint Venture between Tanami Gold NL and Northern Star Resources Limited. The Central Tanami Project area lies on Aboriginal land within the Central Desert Aboriginal Land Trust and the Mt Frederick Aboriginal Land Trust, both administered by the Central Land Council.
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	MLS180 and EL26925 are granted and in good standing
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	The Molech area has been explored since the mid 1980's. Numerous companies, including Zapopan NL, Otter Gold NL, Normandy Mining Ltd, Newmont (Asia Pacific), and Tanami Gold NL have been active in the area.
Geology	• *Deposit type, geological setting and style of mineralisation.*	**Banjo** The Banjo deposit is hosted by sandstone, mudstone, chert and basalt from the Mt Charles Formation. Geological interpretations from drill logging, aeromagnetic data and pit mapping suggest that the basalt and sediments are striking about 272° and dipping about -80° South. A 340° trending shear transects the local stratigraphy and has been described as being about 40 metres wide.

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Criteria	JORC Code explanation	Commentary
		Beaver The Beaver deposit is hosted by intercalated mudstone, siltstone, sandstone, coarse grained volcanoclastic units and undifferentiated basalt from the Mt Charles Formation (Thomson, 2012). Geological interpretations of drill logging and aeromagnetic data suggest that the basalt and sediments are striking about 315° and dipping steeply. Mapping from the open pit describes the lithology as thick sequence of mudstone to siltstone that strike 315° and dip 70° South. **Bonsai** The Bonsai deposit is hosted within a 290° trending shear zone that transect basalt and interbedded siltstone and sandstone from the Mt Charles formation. Geological interpretations of drill logging and aeromagnetic data suggest that the basalt and sediments are striking about 280° to 335°, dipping steeply and display several fault offsets. **Cheeseman** The Cheeseman deposit is hosted by regional shear that generally trends at about 340°. In the Cheeseman area there is an apparent inflection in this zone where the shear changes from about 330° to 320°. The host rocks consist of basalt and siltstone and sandstone. Basalt noted in the drill hole logging were used as marker units to interpret the geology. Interpreted basalt outside of the shear has an apparent strike of between 1° to 20° and is steeply dipping. Within the shear the basalt has an apparent strike that is parallel to the shear zone. **Orion** The Orion deposits are hosted by a regional shear that generally trends between 325° to 340° and is interpreted to be the same structure that hosts Banjo in the south and Cheeseman in the north. The local geology consists of siltstone, sandstone, and basalt with minor felsic units. Basalt noted in the drill hole logging were used as marker units to interpret the geology. Basalt outside of the shear strikes at about 330° and has apparent steep dip and is 50 to 60 metres thick. Basalt within the shear is discontinuous and is up to 15 to 20 metres thick and steeply dipping. **Pendragon** The Pendragon deposit is hosted within a 300° trending shear zone that transect basalt and interbedded siltstone and sandstone from the Mt Charles formation. This appears to be a similar structure to the shear that hosts the Bonsai deposit.
Drill hole information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole*	This report pertains to the reporting of Mineral Resources. Exploration results have previously been reported to the ASX by the various previous explorers.

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Criteria	JORC Code explanation	Commentary
	• *down hole length and interception depth* • *hole length*	
	• *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.*	This report pertains to the reporting of Mineral Resources. Exploration results have previously been reported to the ASX by the various previous explorers.
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.*	This report pertains to the reporting of Mineral Resources. Exploration results have previously been reported to the ASX by the various previous explorers.
	• *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.*	This report pertains to the reporting of Mineral Resources. Exploration results have previously been reported to the ASX by the various previous explorers.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No metal equivalent values were used to report previous exploration results.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.*	The reported drill holes have been drilled approximately perpendicular to the orientation of the targeted mineralized.
	• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	Mineralisation structures are vertical to sub-vertical.
	• *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').*	When exploration results were previously disclosed, only downhole lengths were reported. True widths are not known.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Appropriate diagrams accompany this 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 practiced to avoid misleading reporting of Exploration Results.*	Both high and low grades have been reported accurately, clearly identified with the drill-hole attributes and 'From' and 'To' depths. All intercepts for all holes have been reported regardless of grade.
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,*	Exploration results have previously been regularly reported to the ASX by the previous various explorers.

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Criteria	JORC Code explanation	Commentary
	groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
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).*	Drilling is planned for FY24 to examine the depth extensions of the Beaver deposit.
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Appropriate diagrams accompany this release.

Section 3 - Estimation and Reporting of Mineral Resources

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.* • *Data validation procedures used.*	The drill hole database is managed by Northern Star Resources in Acquire. MJM completed systematic data validation steps after receiving the database. Checks completed by MJM included verifying that: • Down-hole survey depths did not exceed the hole depth as reported in the collar table. • Visual inspection of drill hole collars and traces in Surpac. • Assay values did not extend beyond the hole depth quoted in the collar table. • Assay and survey information was checked for duplicate records. There are some minor overlap errors in the RC and diamond drill holes where 4 metre samples overlapped later 1 metre samples, but the occurrence was not significant
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	The competent person, Mr Graeme Thompson, Principal Resource Geologist and Mr Joe McDiarmid, Director of MoJoe Mining has made a number of visits to the Tanami JV area
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	The confidence in the geological interpretation is moderate to good as there are open pit exposures and it is based upon RC and several diamond drill holes. Mineralisation was based upon sectional interpretations that were assumed to be continuous between sections. At this stage of the project no alternative geological interpretations have been considered. The local pit geology was georeferenced in Surpac and used to help interpret the geology.

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Criteria	JORC Code explanation	Commentary
		The Molech and Pendragon deposits are hosted by mudstone, sandstone, mudstone, chert, volcanoclastic units and basalt from the Mt Charles Formation. **Banjo** Geological interpretations from drill logging, aeromagnetic data and pit mapping suggest that the basalt and sediments are striking about 272° and dipping about -80° South. A 340° trending shear transects the local stratigraphy and has been described as being about 40 metres wide. The southern portion of the open pit was mostly basalt while the northern part is dominated by sediments. The mapping shows that there are numerous faults cutting the stratigraphy. Gold mineralisation is hosted by the shear and has been described as associated with intense silicification and pyrite. The best grades were located within the sedimentary units and only low-grade pods were encountered in the basalt. Mining within the Banjo open pit concentrated on a north plunging lens of gold mineralisation. **Beaver** Geological interpretations of drill logging and aeromagnetic data suggest that the basalt and sediments are striking about 315° and dipping steeply. Mapping from the open pit describes the lithology as thick sequence of mudstone to siltstone that strike 315° and dip 70° South. Total production from the Beaver open pit was 536,225 tonnes @ 3.33 g/t Au for 57,381 ounces of gold. Most of this production came from two dominant re structures locally named the main and east lodes. Both lodes are offset by cross cutting faults with a displacement of 15 to 20 metres. The main lode is terminated in the south by a 290° trending structure that hosts the Bonsai mineralisation. Gold mineralisation appears to be smeared along this structure and was noted to be erratic in grade and weakens with distance from the main lode. The southern part of the main lode is described as greater than 2 metres and consisting of quartz veining and quartz stockworks within a 20-metre-wide altered shear. The strike length is of the order of 210 metres. Visible gold was noted in the quartz veining. The northern vein as a massive quartz vein up to 1.5 metres true thickness within a 5 to 8 metre wide shear. This lode has a strike of about 110 metres.' The east lode has a strike length of about 160 metres in the south and 100 metres in the north. The southern vein has been described as greater than 1 metre true thickness of massive quartz vein and stockworks within a 5 to 8 metre wide shear zone. Visible gold was also noted. The northern vein of the East lode is only 0.5 metre wide within a 2 to 3 wide shear. The best gold grade was found in the volcanoclastic sediment.

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Criteria	JORC Code explanation	Commentary
		Bonsai The Bonsai deposit is hosted within a 290° trending shear zone that transect basalt and interbedded siltstone and sandstone. Geological interpretations of drill logging and aeromagnetic data suggest that the basalt and sediments are striking about 280° to 335°, dipping steeply and display several fault offsets. Near surface mineralisation at Bonsai consisted of laterite or supergene gold mineralisation. Very few descriptions of this material have survived, and it has been largely mined. The strike of the supergene was about 200 metres with a width of 20 metres and a true thickness of up to 3 metres. The bedrock mineralisation at the Bonsai deposit is hosted by sheared basalt and to a lesser degree within the margins of the sheared basalt / sediment contact within a major 290° trending shear zone. The better grades are associated with silicification with quartz stockwork and veins. Modelling of the gold at a 0.5 g/t Au low grade cut off shows that mineralisation has been defined over a strike length of 810 metres in a zone that is up to 120 metres wide. The mineralisation is discontinuous and many of the lodes have an apparent southeast plunge. Strike lengths vary between 20 to 300 metres, The steeply dipping lodes have limited down dip extents and vary from 20 to 130 metres with true thickness of 1-2 metres to 7-8 metres. **Cheeseman** The Cheeseman deposit is hosted by regional shear that generally trends at about 340°. In the Cheeseman area there is an apparent inflection in this zone where the shear changes from about 330° to 320°. The host rocks consist of basalt and siltstone and sandstone. Basalt noted in the drill hole logging were used as marker units to interpret the geology. Interpreted basalt outside of the shear has an apparent strike of between 1° to 20° and is steeply dipping. Within the shear the basalt has an apparent strike that is parallel to the shear zone. An intact regolith profile was encountered in the Cheeseman deposit and the near surface mineralisation consisted of laterite or supergene hosted gold. The mineralisation in the supergene is flat lying and has a strike length of up to 75 metres and a width between 5 to 45 metres and a true thickness of 1 to 8 metres. The strike of the southernmost supergene lodes is between 335° to 340° whilst the northern supergene lodes strike between 315° to 330° and are much smaller in size. The total production from the Cheeseman open pit was 59,136 tonnes @ 3.91 g/t Au for 7,486 ounces of gold. Most of the production ore was derived from enriched laterite cap directly above a high-grade quartz vein. The pit was mined down to a bleached, silty – talc material with high grade gold associated with ferruginous nodules.

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Criteria	JORC Code explanation	Commentary
		Primary gold mineralisation consists of south plunging auriferous quartz veins hosted by sandstones and siltstones. There is a spatial relationship between the mineralisation and the contacts between the sediment and basalt. The strike of the veins ranges from 30 to 100 metres whilst the dip extent ranges from 25 to 80 metres. The true thickness of the veins is generally 1 to 2 metres but can be up to 8 metres. The quartz veins south of 7794850mN strike at about 330° whilst the veins north of this strike between 315° and 325°. **Orion** The Orion North and South deposits are hosted by a regional shear that generally trends between 325° to 340° and is interpreted to be the same structure that hosts Banjo in the south and Cheeseman in the north. The local geology consists of siltstone, sandstone, and basalt with minor felsic units. Basalt noted in the drill hole logging were used as marker units to interpret the geology. Basalt outside of the shear strikes at about 330° and has apparent steep dip and is 50 to 60 metres thick. Basalt within the shear is discontinuous and is up to 15 to 20 metres thick and steeply dipping. Gold mineralisation at the Orion deposit is hosted by a 40 metre wide 325° to 340° trending shear near the contact of basalt and sedimentary units. Mineralisation at Orion North strikes at between 325° to 335° and dips -80° East but smaller lodes do vary. Individual lodes vary in strike length from 10 to 170 metres and have true thickness from 1-2 to 10 metres. The down dip extent varies from 10 to 100 metres. There is minor supergene mineralisation. The Orion North mineralisation occurs in an inflexion in the shear. High grade gold zones were associated with increasing quartz veins and stockworks within a bleached and silicified basalt. Gold mineralisation at Orion South strikes at about 330°, dips steeply and has an apparent plunge to the south. Strike lengths vary between 10 and 80 metres and have true thickness from 1-2 to 9 metres. The down dip extent varies from 10 to 60 metres. During mining the open pit did not correspond well with model and high grade intercepts received in the RC drilling were not reproduced. **Pendragon** The Pendragon deposit is hosted within a 300° trending shear zone that transect basalt and interbedded siltstone and sandstone from the Mt Charles formation. This appears to be a similar structure to the shear that hosts the Bonsai deposit. Gold mineralisation at Pendragon is hosted within a 300° trending shear. The interpretation used all available drilling to interpret the mineralisation as the drill spacing was broad. The lithology that hosts the mineralisation is mostly sandstones and siltstone with a spatial association with basalt. Strike lengths vary between 50 to 200 metres with true thickness varying from 1-2 to 8 metres and down dip extents from 20 to 90 metres. The strike of individual lenses varies between 300° to 320° and dips are near vertical.

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Criteria	JORC Code explanation	Commentary
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	**Banjo** The overall strike of the gold mineralisation within the model is 860 metres. Bedrock mineralisation is steeply dipping with many lenses vertical. There are four small supergene flat lying lenses. The steep dipping lenses have strike lengths and down dip extents of up to 100 metres but typically they are shorter. True thickness varies from 1-2 metres to 7-8 metres. The open pit has been mined down to about 70 metres below the surface with mineralisation in the base of the pit. Mineralisation has been interpreted down to 150 metres below the surface. **Beaver** The southern part of the main lode at Beaver has a strike of about 210 metres and varies from 2 to 8 metres wide and extends down dip about 220 metres. The northern part of the main lode has a strike of 110 metres and has a true thickness of at least 1.5 metres to several metres and extends down dip 150 metres. The east lode has a strike length of about 160 metres in the south and 100 metres in the north. The southern vein has been described as greater than 1 metre true thickness of massive quartz vein and stockworks. The northern vein of the East lode is only 0.5 metre wide. The down dip extent is about 150 metres. The Beaver Open Pit has been mined down to 110 metres below the surface. Mineralisation is exposed in the base of the pit and a small lens crops out near surface. The mineralisation has been interpreted down to 220 metres below the surface. **Bonsai** The strike of the supergene was about 200 metres with a width of 20 metres and a true thickness of up to 3 metres. Modelling of the steep dipping gold at a 0.5 g/t Au low grade cut off shows that mineralisation has been defined over a strike length of 810 metres in a zone that is up to 120 metres wide. The mineralisation is discontinuous and many of the lodes have an apparent southeast plunge. Strike lengths vary between 20 to 300 metres, The steeply dipping lodes have limited down dip extents and vary from 20 to 130 metres with true thickness of 1-2 metres to 7-8 metres. The open pit was mined down to 50 metres below the surface. Mineralisation is exposed in the base of the pit. Many of the lodes are near surface and the deepest mineralisation has been extended to 150 metres below the surface.

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Criteria	JORC Code explanation	Commentary
		Cheeseman Supergene mineralisation is flat lying and has a strike length of up to 75 metres and a width between 5 to 45 metres and a true thickness of 1 to 8 metres. The strike of the southernmost supergene lodes is between 335° to 340° whilst the northern supergene lodes strike between 315° to 330° and are much smaller in size. Primary gold mineralisation consists of south plunging auriferous quartz veins. The strike of the veins ranges from 30 to 100 metres whilst the dip extent ranges from 25 to 80 metres. The true thickness of the veins is generally 1 to 2 metres but can be up to 8 metres. The open pit was mined down to 25 metres below the surface. The pit is now backfilled. Mineralisation is near surface and has been interpreted down to 150 metres below the surface. **Orion** Gold mineralisation at the Orion deposit is hosted by a 40 metre wide 325° to 340° trending shear. Mineralisation at Orion North strikes at between 325° to 335° and dips -80° East but smaller lodes do vary. Individual lodes vary in strike length from 10 to 170 metres and have true thickness from 1-2 to 10 metres. The down dip extent varies from 10 to 100 metres. Gold mineralisation at Orion South strikes at about 330°, dips steeply and has an apparent plunge to the south. Strike lengths vary between 10 and 80 metres and have true thickness from 1-2 to 9 metres. The down dip extent varies from 10 to 60 metres. The Orion North Pit was mined down to 55 metres below the surface while the Orion South Pit was mined down to 35 metres. The Orion South Pit is now backfilled. Mineralisation is exposed in the base of the Orion North Pit and has been interpreted down to 120 metres below the original surface. The top of insitu mineralisation is interpreted to be 7 to 20 metres below the current surface. **Pendragon** Gold mineralisation at Pendragon is hosted within a 300° trending shear. Strike lengths vary between 50 to 200 metres with true thickness varying from 1-2 to 8 metres and down dip extents from 20 to 90 metres. The strike of individual lenses varies between 300° to 320° and dips are near vertical. The top of the mineralisation is about 7 metres below the surface and has been interpreted down to 100 metres.
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*	Ordinary Kriging (OK) interpolation with an oriented 'ellipsoid' search was used for the estimate. Surpac software was used for the estimations.

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Criteria	JORC Code explanation	Commentary
	extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Three dimensional mineralised wireframes (interpreted by MJM) were used to domain the gold data. Sample data was composited to 1m down hole lengths using the 'fixed length' method. Intervals with no assays were excluded from the estimates. The influence of extreme grade values was addressed by reducing high outlier values by applying top-cuts to the data. These cut values were determined through statistical analysis (histograms, log probability plots, CVs, and summary multi-variate and bi-variate statistics) using Supervisor software. Top cuts were done on a lode basis and prior to estimation. Reconciliations with the production from each open pit was also attempted. The mining cut-off grade used by OGM was 1.1 g/t gold and it appears that the total production from the area was about 0.97 Mt @ 3.01 g/t gold for 94.2 kOz. The current models at 1.1 g/t Au give 0.76 Mt @ 3.69 g/t Au for 90.1 kOz. Estimated ounces from the current models are within 2.2% of the claimed production and if dilution was around 10-15% then the estimations reconcile well, however there are too many assumptions to be confident. The largest error was in the Beaver open pit where claimed production was 57,381 ounces of gold versus 52,619 ounces of gold from the current model. The difference can be accounted for in the southern end of open pit where the mineralisation was interpreted to be striking about 310 in the Bonsai shear zone. This area was bulk mined. The current model used all available data to interpret the mineralisation and it suggested numerous NE trending short strike length, southwest plunging discontinuous lenses with waste separating them within the Bonsai shear zone. Not all lenses could be wireframed due to the uncertainty in the geometries. The current estimate in in line with the Tanami Gold NL April 2010 MRE that was constrained by economic parameters. The Molech April 2010 MRE was 1.0 Mt @ 3.25 g/t Au for 109 kOz. This does not include the Pendragon resource. The Tanami Gold NL Molech January 2011 MRE is 1.68 Mt @ 2.78 g/t Au but this is unconstrained by economics. MJM has not made assumptions regarding recovery of by-products from the mining and processing of ore at the Molech & Pendragon deposits. All modelling was completed in Surpac Geovia software. No estimation of deleterious elements was carried out. Only gold was interpolated into the block model. The block model used a primary block size of 10m NS by 5m EW by 5m RL with sub-blocking to 2.5m by 1.25m by 1.25m. The parent block size was selected based on approximately half the average drill

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Criteria	JORC Code explanation	Commentary
		spacing of RC drilling in the well drilled areas, while dimensions in other directions were selected to provide sufficient resolution to the block model in the across-strike and down-dip direction. QKNA was completed in Supervisor software to justify the block size, number of samples, search ellipses and discretization An orientated 'ellipsoid' search was used to select data and was based on the observed lode geometry. The search ellipsoid was orientated to the average strike, plunge, and dip of the main lodes. Search ellipses and the minimum and maximum number of samples were lode dependent and varied considerably. A first pass search radius of 25 to 50 metres with a minimum number of samples of 2-6 samples and a second pass radius of 50 to 100 metres with a minimum number of 2-6 samples were used. A third pass search radius of 100-200m was used with 2-6 samples to ensure all blocks within the mineralised lodes were estimated. The maximum number of samples ranged from 3-26 depending on the number of samples in the domain. Blocks that did not fill were given a fourth pass using nearest neighbour estimation. Selective mining units were not modelled. The block size used in the resource model was based on drill sample spacing and lode orientation. To validate the model, a qualitative assessment was completed by slicing sections through the block model in positions coincident with drilling. A quantitative assessment of the estimate was completed by comparing the average gold grades of the composite file input against the gold block model output for all the resource objects. A trend analysis was completed by comparing the interpolated blocks to the sample composite data within the lodes. This analysis was completed for northings and elevations across each deposit. Validation plots showed good correlation between the composite grades and the block model grades.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages and grades were estimated on a dry in situ basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The Mineral Resource estimate has been constrained by the wireframed mineralised envelopes, is undiluted by external waste and reported above a 0.65g/t gold cut-off grade for open pit material within a $AU2700 pit shell. The underground resource is reported within a $AU2700 optimised stope and is undiluted by waste.
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*	It is assumed the Molech and Pendragon deposits will be mined by open pit and underground methods when a new mining operation can be established. - OP Mining Recovery 98% - OP Mining Dilution 10% - Oxide Processing Recovery 90%

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Criteria	JORC Code explanation	Commentary
	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.	- Trans Processing Recovery 90% - Oxide and backfill slope 45° - Trans and Fresh slope 39° - Backfill or Waste Dump Mining Cost $2.50/t - Mining Cost $4.00/t - Incremental Ore Mining Cost $4.50/t - Open Pit Grade Control Cost $0.80/t - Mill Opex Cost (2.0 Mtpa) $30.92/t - ROM to mill transport distance 37.4 km - ROM to Mill cost $3.74/t - Admin (G&A) cost $4.50/t - Au Royalty 5% - Au Price AU$2700/tr oz - Deswick software was used for the underground resource stope optimisation. - Stope Optimiser Assumptions - HW planned dilution skin 0.5 m - FW planned dilution skin 0.25 m - Minimum Mining width 1.8 metres not including dilution skins - Stope optimisation length 20 m along strike - Sub level interval 20 m - Optimise grade - Stope optimisation -20 degrees - Sub Stope Shapes enabled - Smoothing fast - UG mining unplanned recovery 5% - UG mining unplanned dilution 5% - Processing Recovery 90% - UG Stoping cost $70 per tonne ore - UG Opex Fixed Cost $5 per tonne ore - Mill Opex Cost (2Mtpa) $30.92 per tonne - ROM to mill transport $3.74 per tonne - Admin $4.50 per tonne - NT Factor $11.48 per tonne - Au Royalty 5% - Au Price AU$2700 troy ounce

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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.*	Metallurgical testing was carried out in August 1998 on samples from 3 RC holes PGRC075, PGRC080 and PGRC081. The extract depth downhole of the samples is unknown but comments are provided of the type of material that was tested. The location of the test work is the main lode of the Beaver open pit. The metallurgical test work may not be representative of the entire Molech area. The recoveries ranged from 84.6 to 97%. There has been 6 open pits mined in the Molech area and the recoveries are thought to be in this range however no mill recovery data has been located.
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 be reported with an explanation of the environmental assumptions made.*	No assumptions have been made regarding environmental factors. The area has been previously mined during the late 1990s through to 2001. Haul roads, open pit and waste dumps still exist from this period.
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.* • *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.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	There is no bulk density data from the Molech Gold deposits. The only bulk density data is from the open pit closure reports where average bulk density for the entire pit was back calculated. Density values were taken from average densities for sedimentary rocks and basalts and adjusted for RL to account for oxidation. These values may not be correct. It is recommended that diamond holes are completed to gather representative bulk density measurements. At this stage of the project, it is assumed that these values will be close to the real values.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie 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).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The Mineral Resource estimate is reported here in compliance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' by the Joint Ore Reserves Committee (JORC). The Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. No Measured Resource was categorised due to no actual bulk density data, no QAQC data, open pits finishing early due to geotechnical issues, water ingress and loss of the detailed mining history. The Indicated Mineral Resource was defined within areas of RC and diamond drilling of 25 by 25 metre, where the continuity and predictability of the lode positions was good, and the estimation had reasonable slopes of regression. The Inferred Mineral Resource was assigned to areas where support for the continuity

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		of mineralisation was limited by wider spaced drilling or insufficient drilling in smaller lodes. The minimum requirement for an inferred resource is 3 drill holes spaced apart so that strike and dip can be determined. Validation of the block model shows good correlation of the input data to the estimated grades. The result reflects the competent person's view that the classification is Indicated and Inferred.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	Reviews of this estimate have been conducted by Northern Star Resources and Tanami Gold NL geologists.
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 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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	There are a number of assumptions used in the modelling the Molech & Pendragon MRE that affects the confidence of the MRE. No QAQC data is available to assess the quality of the sampling and assaying. The data should be used with caution. Comments during mining stated that grade control with ditch witch trenching could not reproduce the grades obtained by RC drilling. Grades estimated in modelling by OGM were not achieved when mining and only Beaver and Cheeseman Open Pits made a profit. No bulk density measurements have been taken at the Molech deposits. The bulk density values applied were from averages for basalt and sediment and adjusted for oxidation by RL. These may not be correct. Metallurgical testing has only been carried out on 3 RC holes from the main lode at the Beaver deposit and may not be reflective of the rest of the mineralisation. No geotechnical studies have been completed to determine the mining parameters. The area is known for open pit wall failures and water inflows. Some of the resources may not be mineable. The classification of transitional material as an underground resource is high risk as ground conditions may be too unstable to mine the material using underground methods. The Beaver and Bonsai open pits were abandoned due to pit wall failures and water ingress in the early 2000s. Ore was left in the base of the Open Pits. It may not be possible to safely mine any of the Molech area by open pit methods without laying down the walls and increasing the strip ratio.

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		During mining of the Banjo, Beaver and Bonsai deposits by OGM, tonnages of ore from the models versus production was reasonable however the grade recovery was 75%, 91% and 88% respectively. This reflected in the ounces produced. Mining of Cheeseman and Orion North deposits returned far more tonnes at a lower grade than the models predicted but the ounces were as predicted. Mining of Orion South returned on 64% of the tonnages predicted and 60% of the ounces.

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