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Resource Summary Report

Date	29/01/2021
To	D. Karp, S. McDonald, R. Griffith
From	I.Taylor
Document No	MA2009-3-2
Subject	Mount Boppy Gold Mine Resource Estimate

1 INTRODUCTON

The Mount Boppy Gold Mine is located in New South Wales approximately 50 km east of Cobar at 435130 mE, 6508060 mN (MGA zone 55). Underground mining from 1897 to 1923 extracted material to a maximum depth of about 230 m. Open pit mining by Polymetals and later Black Oak Minerals occurred in two phases in 2002-2005 and 2015 down to a maximum depth of 80 m. Mining recommenced in mid-2020 under Manuka Resources Ltd (MKR).

Gold mineralisation occurs in quartz-sulphide veining hosted in breccias and tension fractures in two main north-striking and steeply west dipping zones: the thicker, more continuous East Lode and narrower, less well developed West Lode. Lodes are truncated on their west side and at depth by a NNE striking and steeply east-dipping structure known as the West Fault. During underground mining workings were supported with timber and back-filled with tailings sands from processing. Sand fill samples grade between 0.05 g/t Au and 38 g/t Au.

Highest grades in remnant (un-mined) material occur proximal to the hangingwall zone of the East Lode above dip flexures and near the intersection with the West Lode.

Mineral Resource Estimate

The mineral resource estimate for Mt Boppy is reported within the design pit shell that reaches a maximum depth of 215 m below surface at the southern end of the deposit. MA has classified the current estimate as Measured, Indicated and inferred. Resources are reported with respect to the current pit design. Material within the pit design is reported at a 1.6 g/t cut off and material below the pit design is reported to a 3.0 g/t cut off.

Classification	Tonnes	Grade (g/t)	Gold (oz)
Measured	207,230	4.89	32,570
Indicated	144,200	4.15	19,300
Inferred	11,000	6.7	2,000
Total	362,430	4.62	53,870

*The preceding statements of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition.
Due to rounding to appropriate significant figures, minor discrepancies may occur. All tonnages reported are dry metric.

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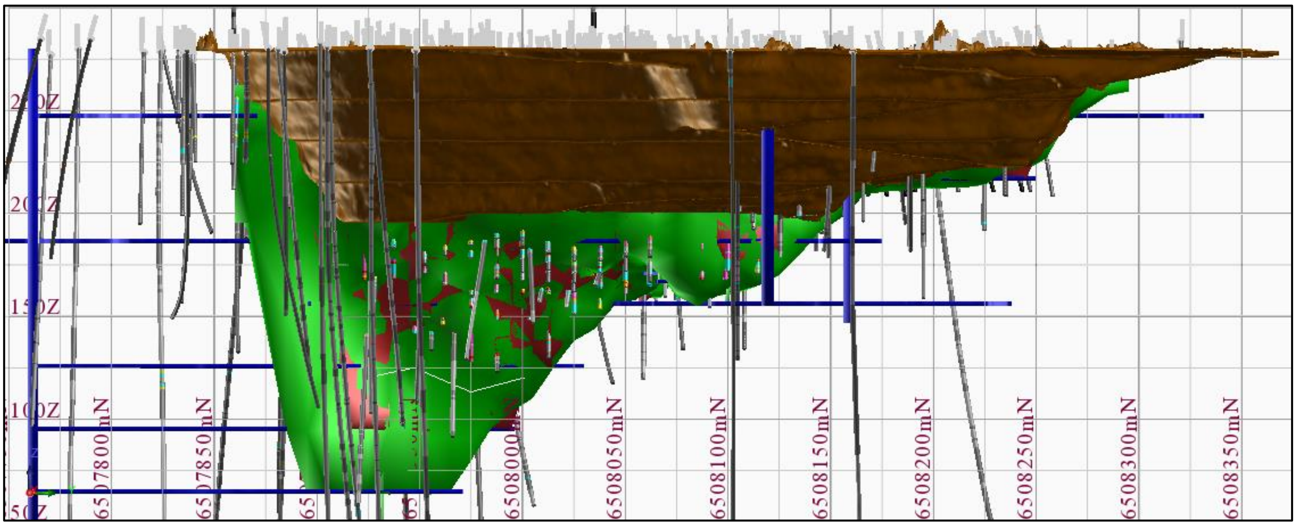

Figure 1-1. Long Section and Plan of Mt Boppy with drilling

1.1 Information used

This report is based on technical data provided by Manuka Resources (MKR) to Mining Associates (MA). MKR provided open access to all the records necessary, in the opinion of MA, to enable a proper assessment of the project and resource estimates. MKR has warranted in writing to MA that full disclosure has been made of all material information and that, to the best of MKR's knowledge and understanding, such information is complete, accurate and true. Readers of this report must appreciate that there is an inherent risk of error in the acquisition, processing and interpretation of geological and geophysical data, and MA takes no responsibility for such errors.

Additional relevant material was acquired independently by MA from a variety of sources. The list of references at the end of this report lists the sources consulted. This material was used to expand on the information provided by MKR and, where appropriate, confirm or provide alternative assumptions to those made by MKR.

1.2 Geology and Mineralisation

Mt Boppy lies within a narrow north-striking fault-bounded sliver of mid-Devonian age siltstone and greywacke of the Baledmund Formation that projects northwards into Ordovician age Girilambone Group psammitic and phyllitic metasediments. The eastern contact of Baledmund Formation dips steeply (60°-80°) to the west and is interpreted as a normal fault parallel to an original stratigraphic contact, with basal conglomerate mapped in patches. The western contact is marked by a north-northeast striking, steeply east dipping fault ("West Fault").

The geometry of mineralisation shows two main zones – Main (East) and West Lodes parallel to the east and west contacts of Baledmund Fomation respectively. The lodes intersect at depth in the northern part of the deposit along a line plunging about 20° south. Between the major lodes several steeply dipping minor lodes are arranged in an en-echelon pattern. In the central part of the deposit between about 6508050 mN and 6508100 mN the East Lode is narrower with less peripheral mineralisation. South of 6508050 mN the East Lode becomes wider and another lode, partly mined from historic underground workings, occurs in the hangingwall. As with the northern end of the deposit, the volume between lodes is occupied by multiple

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minor veins. High grade mineralisation in the southern part of the deposit is related to dip and strike flexures in the East Lode, which plunge gently to the north.

At the intersection of the East and West lodes in the north the Main Lode becomes substantially thicker and sub horizontal, which was originally interpreted as vein fill within a syncline 'saddle-reef' type geometry. Later work has questioned this interpretation, largely due to the lack of evidence for tight folding or a change in bedding-cleavage vergence across Baledmund Formation rocks in the pit.

East Lode mineralisation is developed as quartz veining, quartz fill breccia and wall rock silicification parallel to the faulted eastern contact of Baledmund and Girilambone rocks. Thickness of the lode mined underground varied from 1.5 m to 10 m.

The West Lode has a width of about 1 m to 2 m and is largely fault breccia comprising fragments of phyllite, sericitic siltstone and quartz. Gold grades within the West Lode are best developed in the area south of, and near its intersection with, the Main Lode.

Mineralogy of the lodes comprises quartz, pyrite and locally abundant sphalerite and galena. The presence of cryptocrystalline silica in some parts has led to speculation that Mt Boppy formed as a high-level epithermal style deposit, although other evidence indicates a structurally controlled mesothermal/orogenic gold model is more apt.

1.3 Geological Interpretation

Historic workings plans are incomplete, with most information coming from a 1915 publication by the NSW geological survey and annual reports of the Mount Boppy Gold Mine Company. Historic stope wireframes do not exactly match with drilling and mining data. MA re-interpreted mineralisation and stope wireframes using recent pit mapping and drilling results. While the main stopes on the East Lode can be modelled with a reasonable degree of confidence, stopes on the West Lodes not recorded on historic plans are being encountered during mining and grade control drilling.

Mineralisation was interpreted at a cut-off of 1 g/t Au, which represents a natural statistical break in grade distribution. Exploration and grade control RC and diamond drilling were used as the primary constraints for wireframe interpretation, using east-west sections spaced 10 m apart. Blast hole data was used to augment the interpretation. Wireframe boundaries were snapped to exploration drill hole intervals, but not to blast holes.

From the interpretation of mineralisation wireframes and historic mining, there is a clear split into a northern and southern domain, which are separated by a gap of weakly mineralised material.

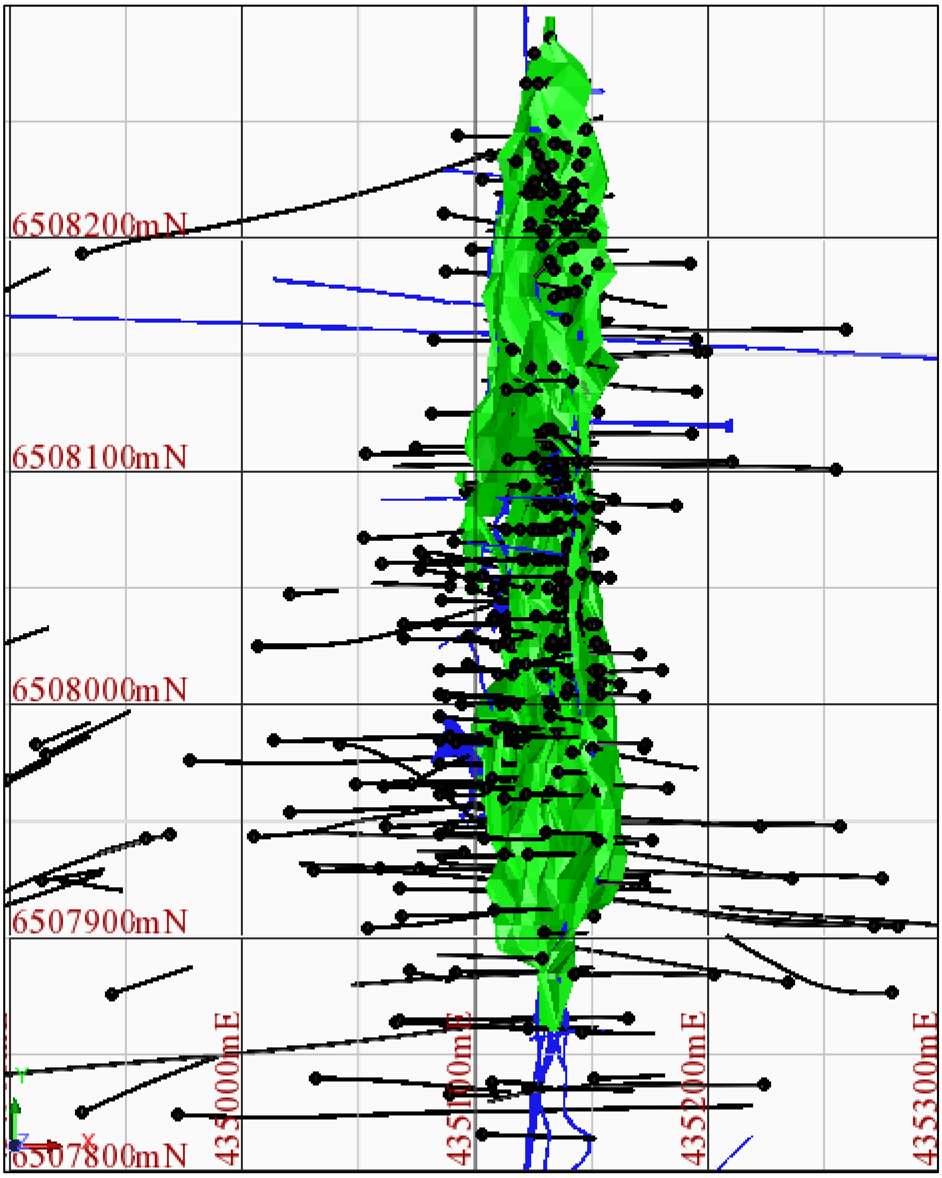

Figure 1-2: Mt Boppy Plan View showing mineralisation and drill hole locations

2 SUPPLIED DATA

The current estimate is based on drill hole data supplied by MKR as text files exported from their corporate database. MA provides ongoing assistance with database management to MKR including quality control checks on historic and new drilling data. Drill hole logs, drill hole collar and downhole surveys and laboratory certificates for all MKR drilling are uploaded electronically and have been verified. The validity and quality of the supplied data is suitable for resource estimation. Pit surveys, geology maps, topography file (40 m nodal grid based on drill collars) and drill hole data base were supplied in GDA94/MGA Zone 55 coordinates.

2.1 DRILL HOLE SURVEYS

The drill collar extents cover the Mt Boppy resource estimate (Table 2-1). Collar positions for in-pit RC and blasthole drilling, and most surface holes were surveyed at an accuracy less than 1 m by Total Station. Drill holes summarised by drill type are presented in Table 2-1.

Table 2-1:Database Extents of Mt Boppy deposit drilling

	Min (m)	Max (m)	Extents (m)
Northing	6507502.03	6508655.96	1153.93
Easting	434522.79	435446.92	924.13
RL	185.38	300	114.62
Hole Depth	0.96	570.6	

Mt Boppy RC grade control drilling was undertaken on east-west sections spaced approximately 12.5 m apart with lode intercepts about 6 m apart on section. Rig placement constraints at the base of the working pit resulted in a variety of hole orientations with respect to the main lode dip and strike.

Table 2-2. Drill hole data summary

Table Name	Data Type	Records
collar	Collar survey data	20414
survey	Down hole surveys	21115
assay	Assay interval and associated analysis	61802
lithology	Logged geology intervals including stope intercepts as Fill void or wood.	10033
styles	Surpac display legends	162
zones_ma	Mineralised and stope interval selections	644

2.1.1 Sample Recovery

RC drilling forms the main sampling methodology for Mt Boppy and recovery has not been quantitatively measured. Within hard rock RC sample recoveries were generally good, but within stope fill zones and the highly fractured margins of some stopes, recoveries were highly variable. In many cases sample return was lost when encountering voids within historic stopes.

2.1.2 Down hole survey

Historic drilling down hole surveys were taken at face value. MA have validated surveys only to the extent of correcting or removing data that is obviously erroneous, such as sudden variations in azimuth or dip between successive readings. MKR drill holes were surveyed at the collar when the rig was setup, then downhole every 30 m using a magnetic multi-shot tool. Several RC grade control holes were unable to be surveyed due of hole collapse and/or gear being suck in the hole.

2.1.3 Density

Historic specific gravity measurements on hard rock were made on drill core samples using the water displacement method. For fresh rock (which comprises all of the current resource), rocks have low porosity and therefore specific gravity is a very close approximation of dry bulk density. The following dry bulk densities were used: 2.4 t/m^3 for oxide, 2.68 t/m^3 for transitional and 2.77 t/m^3 for fresh material. Stope fill was assigned a density value 1.2 t/m^3 based on a density of 1.5 t/m^3 and 80% of the stopes being filled. This figure is considered somewhat conservative based on previous mining experience.

2.1.4 QAQC

Historic drilling by Polymetals and Black Oak included insertion of QC samples (blanks, standards and field duplicates). Assaying was mostly undertaken at external, independent laboratories and QC reports indicated no significant problems with accuracy or precision of assays, nor any bias in sampling. MKR grade control and surface RC drill sampling included insertion of standards and collection of field duplicates. Examination of results indicates assays are accurate and there is no significant bias or issues with precision between duplicate samples.

3 RESOURCE ESTIMATION

Estimation used Ordinary Kriging in two passes with search ellipse parameters derived from variogram model ranges and orientations. First pass distances were 45 m in the north domain and 36 m in the south and deep domains. Second pass distances were approximately double the first pass distances. Informing sample numbers were set at a minimum of 12 and maximum of 24 in the first pass for mineralisation and 9 and 18 for stope estimates. For the second pass sample numbers were reduced to a minimum of 3 and maximum of 12. The influence of blast hole samples was restricted to a maximum of 6 per block should they fall within the search ellipse. Discretisation points were set at 2 x 5 x 2 in the XYZ directions.

Estimates were constrained by wireframe surfaces representing breaks in grade tenor. Three domains were created: northern, southern and deep domains. (Figure 3-1)

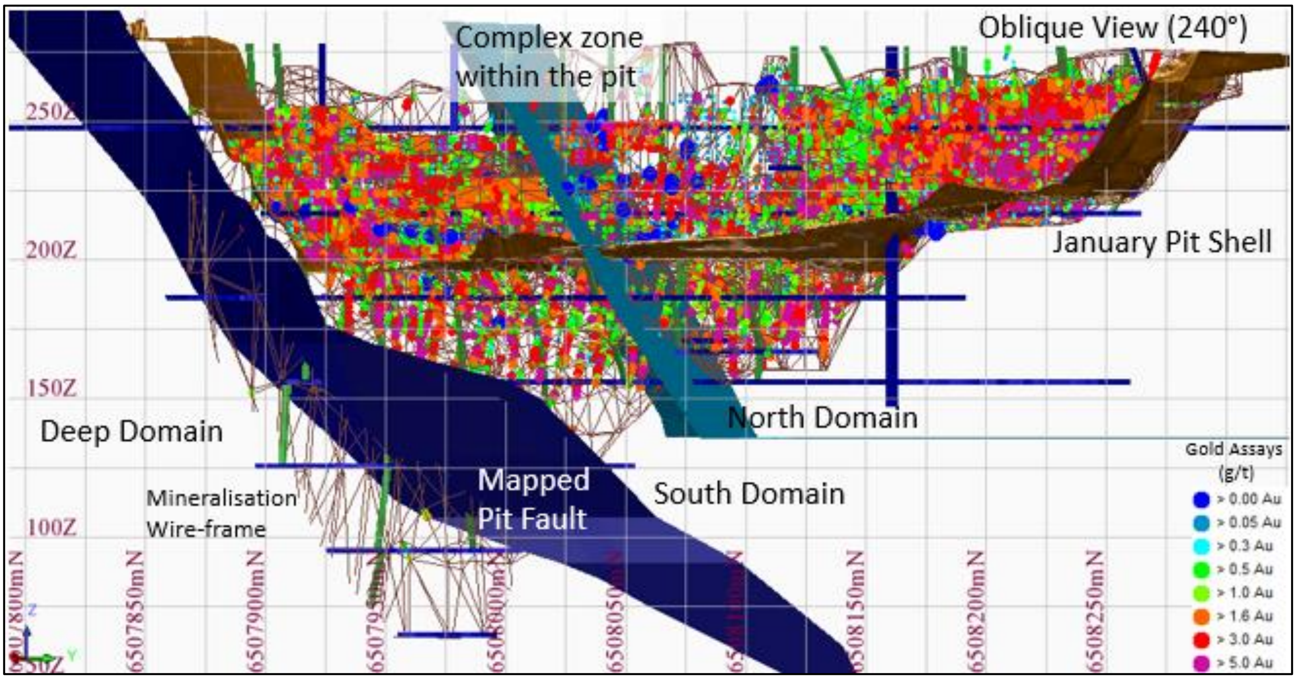

Figure 3-1: Oblique View Looking Towards the Southwest Showing Mt Boppy Estimation Domains

All stope fill (includes rises) material was assigned a grade of 3.6 g/t Au, an historical figure. This is lower than the average DD-RC composite grade for stope fill material that gives an uncapped mean of 3.79 g/t Au. Blast hole data is considered less useful for defining mean grades of stope fill due to the likelihood of samples being mixed fill and wall rock material (mean of blast hole stope samples is 4.99 g/t). The model contains both an estimated stope grade and assigned stope grade. The attribute au_est is the final gold grade, with hard rock mineralisation estimates (au_ok) transferred to au_est and blocks within stopes assigned a grade of 3.6 g/t. Historical shafts and underground level development were left as unfilled voids in the model.

3.1.1 Composite length

All samples were composited down hole with RC and DD drill data composited to 2 m and blast holes composited to 2.5 m. Summary statistics are shown in Table 3-1. 5 m composite blast hole data was not used.

Table 3-1: Summary Composite Statistics

Statistic	RC & DD		Blast Holes	
	Minz	Stope	Minz	Stope
Number of samples	1709	609	12636	4033
Minimum value	0.04	0.01	0.00	0.00
Maximum value	109	85	1125	339
Mean	3.84	3.79	3.87	4.99
Median	1.35	2.65	1.29	2.40
Geometric Mean	1.72	2.10	No Calc	No Calc
Standard Deviation	8.21	5.79	17.39	13.96
Coefficient of variation	2.14	1.53	4.49	2.80

Blast hole samples were mostly 2.5 m lengths, although some 1 m and 3 m samples exist in the database. All blast holes were composited to 2.5 m, which preserved most of the original samples and minimised sample splitting of longer samples. Most exploration drilling is RC and was sampled at 1 m intervals. Rather than compositing to 2.5 m to match blast hole samples, which would have resulting in sample splitting, samples were composited to 2 m lengths.

Compositing was carried out downhole within tagged mineralisation and stope intervals in RC and DD drill holes. Blast holes were composited downhole to 2.5 m and a point was created at the centroid of each composite. Separate data sets for blast hole samples within mineralisation and stopes were created by selecting points within the 3D interpreted wireframes. Blast hole and RC-DD data was then combined into a single informing sample data set to be used in resource estimation.

QQ plots show a positive bias toward blast hole sampling compared to diamond and RC sampling (Figure 3-2), which is likely due to the effects of vertical blast holes sampling down steeply dipping high grade structures more frequently than angled drilling. For this reason, the number of blast holes used to inform a block was restricted.

To restrict the influence of blast holes, (no 5 m composited blast holes were used), a variable field (D6) was used that assigned a value of “BH” to blast holes and the holed ID to other drill samples. The estimation routine was set to accept a maximum of 6 samples having the same value stored in the D6 variable. In this way a maximum of 6 blast hole samples and a maximum of 6 samples from an individual drill hole were used to inform the estimate in any given block.

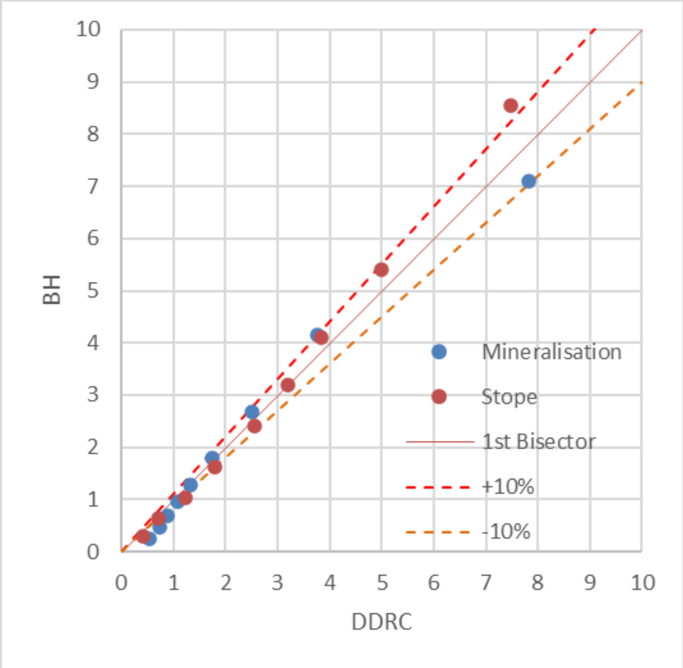

Figure 3-2: QQ Plot of DDRC and BH composite holes

3.1.2 Grade Caps

Composite statistics were analysed to determine if grade capping was necessary to reduce the influence of outliers on the estimation. Combined RC-DD data was examined and a grade cap at the 98.5 percentile, or 35.2 g/t Au, was determined to be optimal. The cap of 35.2 g/t Au was applied to mineralised samples from the RC and BH programs. Sulphur data, although sparse (67 assays within mineralisation and 10 within stope fill, Table 3-1), was also used for estimation of acid forming parameters and a grade cap of 2.5 % S was used. The sulphur content of stope assays appears similar to that of hard rock. Grade capping summary statistics are shown in (Table 3-2).

Table 3-2: Grade Capping Statistics

	Uncapped Composite Data				Capped Composite Data				Grade	
Domain	Count	Mean	Maximum	CV	# Capped	Mean	Cap	CV	% Cap	% Δ
DDRC HG (Au g/t)	1709	3.84	108.7	2.14	26	3.6	**35.2**	1.7	1.52%	-7.3%
DDRC Stope (Au g/t)	609	3.79	85.5	1.53	10	3.5	**22.2**	1.1	1.64%	-6.7%
DDRC HG (S%)	67	1.12	2.9	0.46	1	1.1	**2.5**	0.4	1.49%	-0.5%
DDRC Stope (S%)	10	1.05	2.5	0.67	1	1.0	**2.4**	0.7	10.00%	-1.0%
BH HG	12636	3.87	1125.0	4.49	190	3.1	**30.6**	1.7	1.50%	-19.3%
BH Stope	4033	4.99	339.0	2.80	61	4.2	**39.2**	1.5	1.51%	-15.2%

Blast holes were capped at the same values assigned to the Diamond and RC (DDRC) drilling. Capping summaries for blast holes are provided or comparative purposes only.

3.1.3 Variography

Variogram model parameters are shown in Table 3-3. Nuggets were derived from short lags (2 m), and for both domains are around one quarter of the total variance. Maximum ranges are 45 m and 36 m for north and south domains respectively.

Table 3-3. Variogram model parameters.

Domain	Nugget	sill1	range1	sill2	range2	azimuth	plunge	dip	major/semimajor ratio	major/minor ratio
North	0.27048	0.3377	16	0.8707	45	303	-75	20	1	4.5
South	0.3011	0.4949	10	0.3947	36	351	-20	70	1.5	2.5

A third domain (deeps) below the south domain was defined. This domain has insufficient samples to generate experimental variograms and the south domain variogram was borrowed to inform these blocks.

3.1.4 Block Model

A single model was created using parent blocks 5 m (x) by 10 m (y) by 5 m (z) with sub-blocking to 0.625 m by 1.25 m by 0.625 m. The block model was extended down to 60 m RL in order to fully cover the interpreted extent of mineralisation at depth (Table 3-4**Error! Reference source not found.**). The small sub-block size was deemed necessary to accurately model the resolution of mineralisation boundaries, in particular historic stope fill.

Table 3-4: Mt Boppy Block Model Parameters

Type	X	Y	Z
Minimum Coordinates	434950	6507800	60
Maximum Coordinates	435300	6508350	290
User Block Size	5	10	5
Min. Block Size	0.625	1.25	0.625
Rotation	0.000	0.000	0.000

Interpreted mineralised lodes and stopes were coded to the block models. Sufficient variables were added to allow grade estimation, Mineral Resource classification, and reporting (Table 3-5). Blocks above the original topography were coded as air and not estimated. Blocks that have been mined were flagged in the final block model.

Table 3-5: Block model attributes

Attribute Name	Type	Decimals	Background	Description
au_est	Real	2	-0.01	Gold ppm estimated by OK
au_id	Float	2	0	gold inverse distance estimate
au_nn	Float	2	0	nearest neighbour estimate
au_ok	Float	2	0	gold ordinary krig estimate
auppm_cut	Real	2	-0.01	Gold ppm capped to 65 and estimated by OK - MA 2016
material	Character	-	air	air, waste (unmineralized), minz (mineralised hard rock), fill (stope fill)
mined	Integer	-	0	flag (1) for material already mined in open cut and in shafts/drives outside stope volume
rescat	Integer	-	0	resource category 1=measured, 2=indicated, 3=inferred, 4=other
rock	Character	-	air	rock or air, divided by original topo surface
s_pct	Real	2	-99	Sulphur est
sg	Real	2	0	specific gravity assigned by weathering and stope code
stope	Integer	-	0	flag (1) for historic stope fill material
weathering	Integer	-	0	1=oxide, 2=transitional, 3=fresh
z_ads	Real	2	0	average distance to sample
z_cbs	Real	2	0	conditional bias slope
z_dhid	Character	-	0	nearest hole id
z_ns	Integer	-	0	number of samples
z_nw	Integer	-	0	kriging number of negative weights
z_ps	Integer	-	0	estimation pass (1 or 2)
zok_kv	Real	2	0	kriging variance

3.1.5 Weathering and Bulk Density

Bulk densities for rock were assigned according to weathering zone, as shown in Table 3-6. Stope fill was assigned a density of 1.2 t/m^3. Stopes are assumed to be 80% filled with sands and broken rock with a combined density of solid material of 1.5 t/m^3, with the remaining 20% void. Average stope fill density was calculated at 80% of 1.5 t/m^3, or 1.2 t/m^3.

Table 3-6: Bulk densities assigned in model.

Weathering Zone	Density (t/m^3)	Base boundary
Oxide	1.4	DTM derived from drill hole logging
Transitional	2.68	According to BOK model, set at 175 m RL
Fresh	2.77	n/a
Stope Fill	1.2	Interpreted stope wireframes

3.1.6 Resource Depletion

The deposit was first mined underground from 1896 to 1923, with a shallow open cut developed at its northern end. Old underground workings encountered in the pit and in drill holes are mostly back-filled with compacted tailings sand and also contain substantial amounts of support timbers. Stopes, winzes and rises are considered to be back-filled with mineralised material. Historic level workings are generally collapsed and not back filled: level workings are flagged as mined (depleted). Extracted material from the open pit is flagged as mined. The Resource has been depleted to the drone photogrammetry pit survey as at 5th of January 2021.

3.2 VALIDATION

3.2.1 Alternate estimation methods

Results of alternative estimation methods (nearest neighbour and ID^2) for the Mt Boppy deposit were plotted as grade tonnage curves (Figure 3-3) to ensure the kriged estimate was not erroneous. Nearest neighbour shows less tonnes and higher grade as it does not employ averaging techniques to assign block grades. The significantly higher grades are common in a high grade narrow vein model gold deposit. Figure 3-3 highlights the local bias present in a NN estimate and shows how ID and OK may over-smooth an estimate. Using fewer informing samples in the estimate increases the effect of the local bias, moving the ID and OK estimate toward the NN estimate. The ID^2 estimate is closer to kriging as it does use averaging weighted by distance but cannot assign anisotropy or de-cluster input data or take into account a nugget effect. The ordinary kriged estimate is the most reliable due to the technique's ability de-cluster the data and weight the samples based on a variogram, which incorporates anisotropy and nugget effect. The grade tonnage curve for the block model demonstrates the desired smoothing when estimating grade from point data (composites) into blocks.

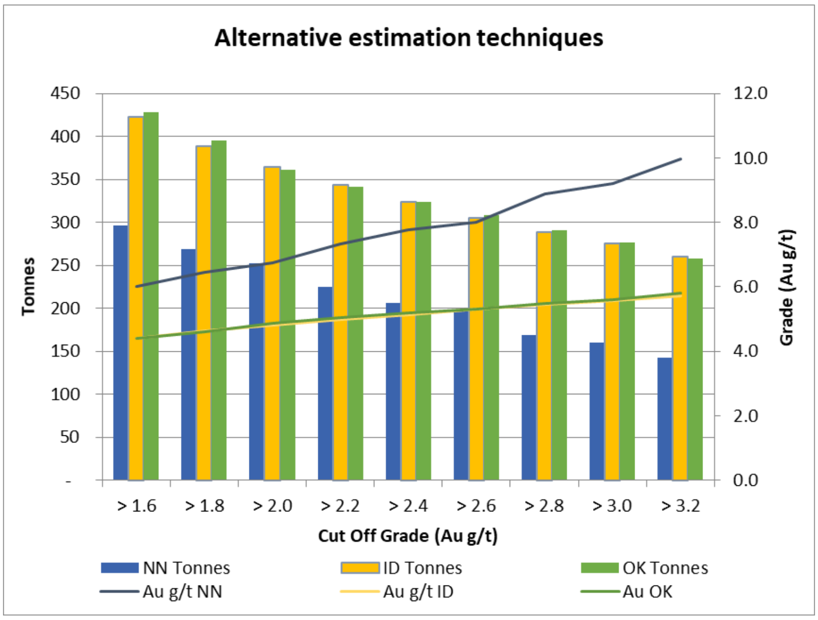

Figure 3-3: Mt Boppy grade tonnage curves (OK, ID^2 NN).

3.2.2 Grade tonnage curves

Global estimates for Mt Boppy provide the grade tonnage curves shown in Figure 3-4. The sudden increase in grade and corresponding decrease in tonnes above 3.6 g/t cut off reflects the removal of stope (fill) material.

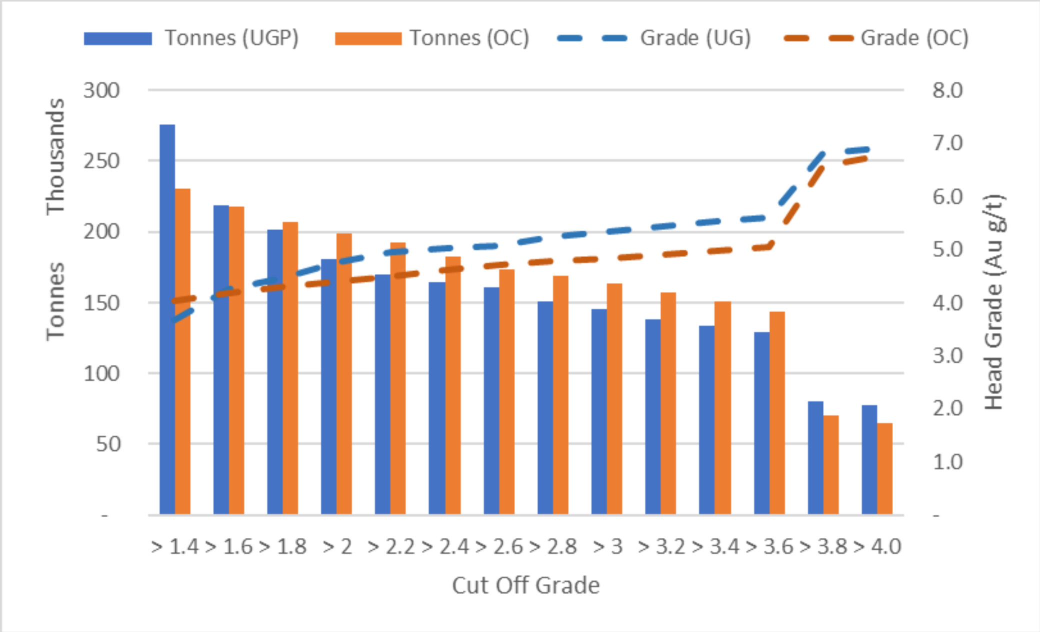

Figure 3-4: Grade tonnage curves

3.2.3 Previous Resources

Following completion of mining at Mt Boppy in late 2015, resource definition for the Mt Boppy MLs focused on remaining material below the Black Oak Minerals (BOK) pit. MKR undertook drilling programs designed to intersect high grade lodes beneath the open pit. Resources were re-modelled by MA in May 2016 after updating stope and mineralisation wireframes. Six additional RC holes were drilled and the resource updated again by MA in September 2016.

The MA 2021 model was reported to the same parameters as previous reports for direct comparison: above the BOK designed pit (mt_boppy_design_goodbye_cut_201511.dtm) and above a 2.0 g/t Au cut-off (Table 3-7).

Table 3-7: Resource Comparison Reported as per 2015-2016 resources (>2.0g/t)

Model	Tonnes	Grade (g/t Au)	Gold (ounces)
BOK Schedule December 2015	343,000	3.58	39,500
Mining Associates May 2016	293,000	3.83	36,000
Mining Associates September 2016	292,000	3.72	35,000
Mining Associates January 2021	301,000	4.44	43,000

3.2.4 Reasonable Prospects for economic extraction.

MKR are currently operating the Mt Boppy Mine site. Costs used in the pit optimisation study are listed in Table 3-8 and average costs to date are also provided.

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Table 3-8: Optimization and year to date costs.

Cost	Optimisation Study	Average To date	Comments
Mining Recovery	95%		
Mining Dilution	10%		
Mining ($/t)	$7.07	$10.81	$/t ore
Haulage	$19.50	$19.87	$/t ore
Crushing	10	9.98	$/t ore
Processing Recovery	74%	75.7%	Grind and leach
Processing ($/ore t)	$40.00	$45.49	$/t ore
Admin ($/t)		$15.14	Optimization used a fixed cost of approx. $300k/mth for admin/sus capex
Revenue (A$/oz)	$2,000	$2,574	Average unhedged price paid in the December Quarter, 1.6g/t cut off is based on $2200/oz.
Sales costs	$6.73		
Royalties	3.5%	2.40%	(includes cost deductions, state 4% on revenue and a $33/oz third party agreement
Payable on Au spot price		99.96%	ABC Contract

Resources reported below the designed pit shell are expected to carry higher mining costs and have been reported above 3.0 g/t, with other costs assumed to be similar.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and cannot be converted to an Ore Reserve. It is reasonably expected that most of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

3.2.5 Reconciliation

MKR have processed 207,799 tonnes @ 2.45 g/t (grades based on Aqua regia ("AR") analysis, a partial recovery technique) providing 16,360 oz. Manuka Mill reported 75.7% processing recovery.

Feed to the mill consisted of monthly physicals (trucking) from the pit of 140,232 kt @ 2.47 g/t (reconciled AR grade) from the pit. This includes legacy broken stocks and newly blasted materials/stope sands. In addition, legacy stockpiles (60,300 t at 2.54 g/t Au reported as Ore Reserves in MKR's' Prospectus) were included in the mill production.

Table 3-9: Reconciled Production

Reconciled Production	Tonnes	Grade (g/t Au)	Gold (oz)
Trucking	140,232	2.47	11,136
LG Stockpile*	12,528	1.8	725
Stockpiles	54,079	2.56	4,444
Mill Production	207,799	2.45	16,360

* Not in reserve

Approximately 88,542 t @ 1.7 g/t was mined from the pit prior to blasting ore. This material was additional to the resource/reserve. Material was sourced from in-pit legacy blasted stocks and pit floor clean-up. Stope material may be denser than the 1.2 t/m^3 predicted in the model. ROM stocks at the end of December were approximately 5 kt.

4 RESOURCE SUMMARY

Based on the study herein reported, delineated mineralisation of the Mt Boppy Mineral Resource is classified as a Mineral Resource according to the definitions from Joint Ore Reserve Committee, Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012):

> *A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated, or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.*

Resources were classified in accordance with the guidelines of JORC (2012), using a combination of average distance to informing samples, number of informing samples used and kriging statistics (conditional bias slope and kriging variance).

The following classification criteria were applied:

- Measured: blocks estimated in pass 1 using a distance to the nearest sample of < 10 m, average sample distance of < 20 m and conditional bias slope >0.7 and kriging variance <0.4.
- Indicated: blocks estimated in pass 1 using a distance to the nearest sample of 20m, and average sample distance of < 40 m, with a conditional bias slope >0.5, plus all stope fill material
- Inferred: remaining blocks estimated with at least 6 samples
- Unclassified: blocks estimated with less than 6 samples.

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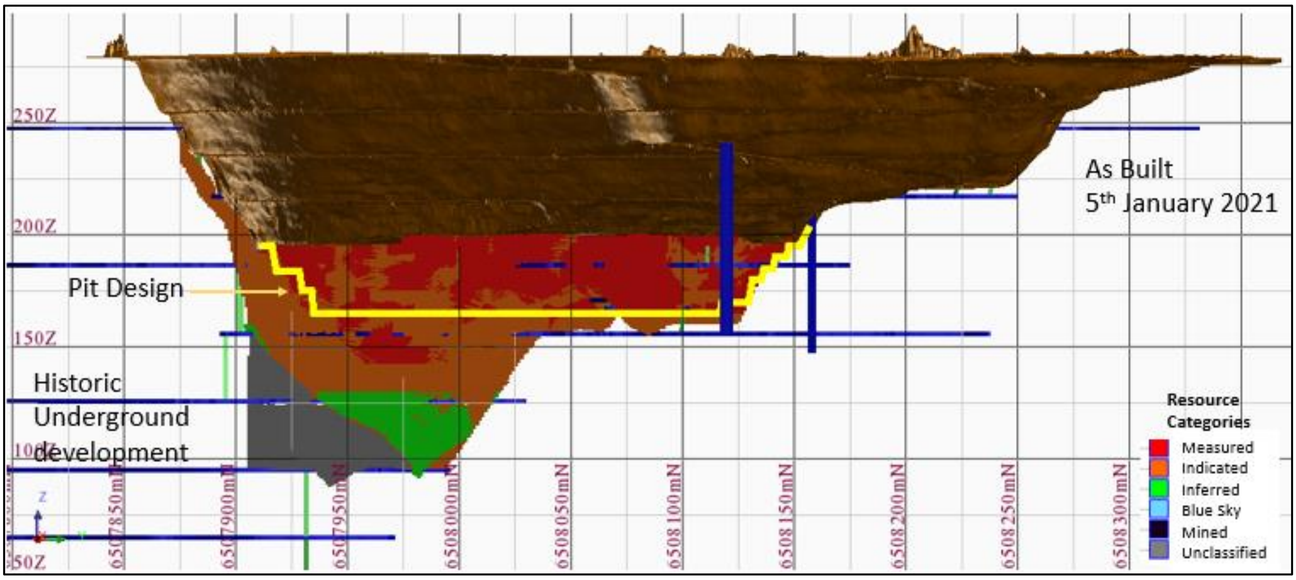

Figure 4-1:: Long Section: Resource Classification

Based on the study herein reported, delineated mineralization of Mt Boppy deposit is classified as Measured, Indicated and Inferred resources according to the definitions of the JORC Code (2012) as presented in Table 4-1. The mineral resource is depleted to the January 5th pit pick-up.

Table 4-1: Resource Summary (Mineral Resource 2020)

Resource	Category	Tonnes	Grade g/t Au	Ounces Au	Stope fill %
Current Open Pit (> 1.6 g/t)	Measured	147,980	4.46	21,220	0%
	Indicated	69,600	3.60	8,100	100%
Below current Pit (> 3.0 g/t)	Measured	59,250	5.96	11,350	0%
	Indicated	74,600	4.67	11,200	59%
	Inferred	11,000	6.7	2,000	0%
Sub Total	Measured	207,230	4.89	32,570	0%
	Indicated	144,200	4.15	19,300	79%
	Inferred	11,000	6.7	2,000	0%
Total		**362,430**	**4.62**	**53,870**	**31%**

*The preceding statements of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition.
Due to rounding to appropriate significant figures, minor discrepancies may occur
All tonnages reported are dry metric

5 APPENDIX 1: JORC CODE 2012 EDITION – TABLE 1

5.1 SECTION 1 SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Sampling techniques	• Samples were collected from a variety of methods from three main phases of drilling: Polymetals (PML, 2002-2015), Black Oak Minerals (BOK, 2015), MAAS (2016) and Manuka Resources (MKR, 2020-present). • From historic reports, PML and BOK sampling techniques all followed industry best practice. • Sampling techniques for RC drilling comprised 1 m reverse circulation samples, from which 3 kg was pulverised to produce a 50 g charge for fire assay. • Diamond drill core was cut in half over varying interval lengths depending on logged geological units and was crushed and pulverised to produce a 50 g charge for fire assay. • Open hole percussion samples collected over 2.5 m intervals using a 3 tier riffle splitter and pulverised to produce a 50g charge for fire assay or 200g charge for bottle roll leach
Drilling techniques	• PML: Diamond (HQ diameter) and RC drilling (5.5 inch face sampling bit), Open hole percussion blasthole drilling • PML: Diamond (HQ diameter) and RC drilling (5.5 inch face sampling bit), Open hole percussion blasthole drilling • MAAS: RC drilling (5.5 inch face sampling bit) • MKR: RC drilling (5.5 inch face sampling bit), open hole percussion blasthole drilling
Drill sample recovery	• No recovery information is available for pre-2011 drilling • For PML and BOK RC drilling from 2011 onwards, recoveries were recorded by comparing the weight of each metre of sample to a theoretical sample weight, estimated using the hole diameter and the degree of weathering. The average recovery was calculated to be 80%, with no appreciable difference between weathering domains. • PML and BOK Diamond drilling recoveries were measured and recorded, with average recoveries of 98% within mineralized zones. There was no correlation between recovery and gold grades. • MKR RC drilling did not quantitatively record recovery but RC piles were qualitatively assessed. Poor to no recovery zones were commonly associated with historic stopes. • No relationship exists between gold grades and recoveries in either RC or diamond logging.
Logging	• Drill holes were geologically logged to various standards over the project history. Hardcopy logs are available for historic drilling. • For post-2011 PML diamond core drilling, core recovery and RQD data were recorded for the core run intervals, and core was routinely photographed. • It is unlikely that the historical grade control drilling was logged geologically. Recent (post-2013) grade control RC and blasthole drilling was logged for the presence of stope fill.
Sub-sampling techniques and sample preparation	• PML Diamond core intervals for sampling were cut in half, following the orientation line to ensure a consistent side of the core was sent for assay. • PML and BOK RC samples were split at the rig by cone splitter at 1 m intervals. • MKR RC samples were split at the rig by a 3 tier riffle splitter at 1 m intervals • BOK and PML blasthole grade control samples were split at the rig by a 3-tier riffle splitter. • MKR blasthole samples were collected by quartering of the blasthole cuttings cone • Field duplicate results for RC and diamond core samples for PML, BOK and MKR showed >95% of data within ±15%, with no appreciable difference between drilling phases. • Samples were dried and pulverised to a nominal 90% passing 75 µm screen. • Gold is finely disseminated and associated with sulphides in quartz veins and the RC sub-sample size is considered appropriate.
Quality of assay data	• PML, BOK, MAAS and MKR RC samples were analysed at ALS Laboratories Orange using Fire Assay with a 50g charge. Fire Assay is considered a 'total' technique for non-coarse gold. • Blank and standard samples were included in batches sent to ALS at a rate of 1 standard and one

Criteria	Commentary
and laboratory tests	blank for every 30 routine samples. No issues were noted with blank and standard analysis. • ALS laboratories undertake internal QC checks including standards, blanks and duplicates. • Some BOK grade control samples were analysed by 200 g bottle roll leach with AAS finish. A series of duplicates were analysed by both fire assay and bottle roll leach to determine an average leach recovery.
Verification of sampling and assaying	• Two PML RC holes were twinned with diamond core holes. • Analyses of twinned RC and diamond holes showed a very close match between grade and length of intersected mineralisation.
Location of data points	• Drill hole collars were located by either Total Station or differential GPS (DGPS) surveys to a high degree of accuracy using the Map Grid of Australia zone 55 coordinate system. • Down hole surveys were collected by camera or Reflex magnetic multishot system at 30 m intervals. • Some RC grade control and other drill holes were unable to be surveyed due to hole collapse during or after drilling. • Topographic control is via a triangulated wireframe surface derived from an aerial photogrammetry survey as well as Total station surveys of the pit. • Topographic control is considered adequate given the relatively subdued relief in the resource area.
Data spacing and distribution	• Drilling was undertaken on a nominal 10-12.5 m (along strike) by 20 m grid throughout the majority of the Resource as well as closely spaced grade control drilling (2.5 m x 3 m). • The data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for estimation by Ordinary Kriging and the classifications of Measured, Indicated and Inferred Resources. • RC and diamond core samples were composited over 2 m and grade control holes over 2.5 m to minimize sample splitting.
Orientation of data in relation to geological structure	• Mineralisation is controlled by steeply west dipping vein structures. • PML, BOK and MKR surface RC and diamond drilling is generally at high angles to the gold mineralisation, drilled towards the east at 50°-70° • MKR in-pit grade control RC drilling was completed using a variety of drill hole orientations due to access and space constraints on the pit floor, with vertical holes avoided where possible. • All blast hole grade control holes are vertical, however the greater density of this sampling reduces the chances of introducing bias.
Sample security	• BOK and MKR sampling was supervised by a company representative up to the point of dispatch to ALS laboratories using a local freight company. • Samples dispatched by MKR to ALS in Orange were bagged in larger polyweave sacks secured with zip ties and delivered by a local freight company. Sample numbers received by ALS were checked again dispatched numbers.
Audits or reviews	• No audits/reviews of sampling techniques and data have been undertaken on any drill programs.

5.2 SECTION 2 REPORTING OF EXPLORATION RESULTS

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Mineral tenement	• ML1681, ML311, MPL 240, GL 3255, GL 5836, GL 5848, and GL5898 and exploration licence EL 5842 are all held by Mt Boppy Resources Pty Ltd. (wholly owned by MKR) • The property on which the Mount Boppy mine situated is Crown Land.

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Criteria	Commentary
and land tenure status	• A Native Title Agreement is in place with the traditional owners. • The Company notes that no land within the licence area may be classified as sensitive land. No further approvals other than those required under the Mining Act 1992 are required.
Exploration done by other parties	• The deposit was first discovered in 1896 and mined by underground methods up to 1923. • Various companies (notably PML, Golden Cross and BOK) have conducted exploration activities around Mt Boppy since the 1960s, with treatment of tailings and open pit mining up until 2015.
Geology	• The Mount Boppy deposit is located in the northern part of Devonian Canbelego-Mineral Hill Rift Zone, flanked by the Kopyje Shelf, on the far eastern side of the Cobar Basin. • Mineralisation occurs in brecciated and silicified sediments and quartz veining developed along a west-dipping fault that down-throws Devonian aged Baledmund Formation rocks on its western side against Orodovician age Girilambone Group rocks on it eastern side. • The Main Lode strikes approximately north-south and dips at approximately 70-80° west. • The best mineralisation in wall rocks occurs within the Baledmund Formation rocks on the western side of the Main Lode where the lode has a shallower dip. • Historical underground workings were supported with timber and back-filled with tailings sands from processing. Sand fill samples grade between 0.05 g/t Au and 38 g/t Au with an average of 3.5 g/t Au. • Mineralisation is predominantly gold, associated with grey quartz veins and minor pyrite.
Drill hole Information	• Exploration results not being reported.
Data aggregation methods	• Exploration results not being reported.
Relationship between mineralisation widths and intercept lengths	• Exploration results not being reported.
Diagrams	• Exploration results not being reported.
Balanced reporting	• Exploration results not being reported.
Other substantive exploration data	• Exploration results not being reported.
Further work	• There is scope for further definition of high grades that extend below the current planned pit floor.

5.3 SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	Commentary
Database integrity	• MA was provided with an export of the current MKR drill hole database • The database contained tables for Collar details and metadata, downhole surveys, assays, lithology, alteration, core recoveries, veins, minerals and oriented structures. • MS Access queries were used to perform basic validation checks, and holes were then loaded into Surpac for a second round of validation, hole lengths, sample lengths, down hole survey errors.
Site visits	• Ian Taylor (AusIMM(CP)) of Mining Associates visited the property at several times during 2020 including a period acting as Mt Boppy mine geologist.
Geological interpretation	• Geological and mineralisation interpretation was carried out on approximately 10 m spaced sections, oriented perpendicular to the strike of mineralization. • Mineralisation was modelled as a single domain above 1 g/t Au, which represents a clear natural break in grade statistics. • Intercepts of lesser grade were included where necessary to aid continuity. • The mineralised domain surrounded other 3D shapes modelled to represent historic underground workings filled with tailings material and timber supports. • Historic workings outlines were derived from old mine plans and drill hole logging. • Drill hole logging and sampling, surface mapping and grade control blast hole sampling were all used to help build the geological and mineralisation model to a high degree of confidence. • Mineralisation displayed very good continuity between sections
Dimensions	• The Mineral Resource has a strike length of 455 m and a maximum depth below surface of 215 m. The horizontal width of combined mineralised domains averages 60 m, and dip 85° to the west.
Estimation and modelling techniques	• Estimation was carried out in Surpac 7.3. • Statistical analyses was carried out on composite samples from mineralization each domain to establish declustered means, top cuts and spatial variability (Variography) • Directional variography indicated differences in spatial anisotropy between the northern and southern parts of the deposit, divided by an interpreted cross-structure striking northwest. • Gold grades were estimated by Ordinary Kriging (OK) interpolation methods into a Surpac block model with parent block dimensions of 10 m (along strike) by 5 m (across strike) by 5 m (vertical). • The parent block size is approximately half of the sample separation distance. The parent blocks were sub-celled to 1.25 m (along strike) by 0.625 m (across strike) by 0.625 m (vertical) for volume resolution. • All estimates were made into parent blocks. Blocks were filled using two estimation passes, with an increasing search radius and decreasing minimum number of samples. Details are given in the report. • Search ellipse directions and anisotropy were aligned with variography results. • Domain boundaries were treated as hard • The estimates were validated by visual inspection of block grades and drill hole data, comparison of alternate estimation methods
Moisture	• Tonnages are based on dry tonnes.
Cut-off parameters	• Cut-off grades applied according to potential mining and processing methods. A cut-off grade of 1.6 g/t was used for material within the designed open pit, based on current production. Resources below the pit are reported to a 3.0 g/t Au cut off, to reflect higher mining costs associated with underground mining methods.
Mining factors or assumptions	• The current mineral resource does not include any dilution or ore loss associated with practical mining constraints.

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Criteria	Commentary
Metallurgical factors or assumptions	• Metallurgical test work and previous processing operations indicate recoveries of around 78% for CIL. Current metallurgical recoveries average 75.7%, based on an aqua regia determined head grade at the plant.
Environmental factors or assumptions	• The project is located on an existing mining lease • No specific issues beyond normal requirements for open pit mining in NSW
Bulk density	• Bulk density values used for conversion of block model volumes to tonnages were derived from 1,306 core sample density measurements using water displacement methods. • Density was assigned to the block model based on weathering domain; 2.4 t/m3 for oxide, 2.68 t/m3 for transitional and 2.77 t/m3 for fresh material. • Weathering domains were defined by drill hole logging for the oxide/transitional boundary and an RL of 175 m for the transitional/fresh boundary. • Stope fill was assigned a density value 1.2 t/m3 based on a density of 1.5 t/m3 and 80% of the stopes being filled. This figure is considered somewhat conservative based on previous mining experience. • No correlation was observed between grade and density
Classification	• Resources were classified according to the number of samples used, distance to samples and estimation confidence statistics: • Resource categories Measured, indicated and inferred were assigned to the resource reflecting the various confidence levels in the resource estimate
Audits or reviews	• No external audits or reviews of the resource estimate have been carried out to date.
Discussion of relative accuracy/ confidence	• The Resource estimate for Mt Boppy is considered robust. Measured resources are considered representative of local tonnes and grade. Grade control drilling and pit mapping has informed the measured resource areas. Indicated and inferred resources are considered representative of the global tonnes and grade contained within the area of the deposit tested by diamond and RC drilling • The interpretations of geology and mineralisation are well constrained and support high confidence in the estimate.