ACN: 646 466 435

MT MALCOLM MINES NL

ASX:M2M

ASX Announcement 28th June, 2024

Outstanding Initial Gold Recovery Results from Golden Crown Prospect

Mt Malcolm Mines NL (ASX: M2M or "the Company") is pleased to announce outstanding initial results from a sample processing study conducted at the Golden Crown Prospect. The study assessed gold recoveries over multiple grades and the economic potential of the project by processing seven batches of samples from 62 mineralised intercepts from the February 2024 RC drilling program using wet gravity separation at a nearby third-party plant.

Highlights

- **The average gravity gold recovery achieved through the study is 63.4%.**
- **The processing study highlights a strong correlation between higher average grades of gold and improved gold recovery.**
- **The gold recovery across the sample batches varied within a range of 34.7% (Batch B) to 87.7% (Batch G).**
- **Batches with an average gold grade of 4 g/t Au and above achieved gold recovery rates at the higher average of 73.3%.**
- **Site preparation has begun for the bulk sampling program, which targets up to ~8,000 tonnes of high-grade shallow gold mineralisation.**

Managing Director, Trevor Dixon, said, *The preliminary findings of the initial analysis of the gold recovery across seven sample batches reveals a consistent trend:* **higher average gold grades correlate with better recovery efficiencies.**
This result enhances the future mining potential at the Golden Crown prospect, emphasizing shallow, higher-grade gold mineralisation. The proximity and availability of a pilot processing plant further strengthens the Golden Crown Prospect for future small scale mining operations."

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The ongoing study plays a pivotal role in evaluating the economic feasibility of processing high-grade material from the Company's upcoming bulk sampling exercise. The Company aims to process up to ~8,000 tonnes of high-grade material at a nearby third-party plant (ASX release on 29th May 2024).

The results will assist the Company to determine the suitability of aligning future small-scale mining operations to this 50-tonnes-per-day capacity plant due to its proximity to the Golden Crown Prospect.

To assess both the plant's efficiency and the samples' amenability for the processing techniques, a meticulous sampling collection and processing regime has been implemented. This regime comprises seven batches (A to G) from RC samples from February 2024 drilling, with average grades ranging from 2 g/t Au to over 41 g/t Au. These batches collectively weigh approximately 1.3 tonnes (see Table 1).

Subsequently, the samples have been delivered to Blockchain Resources Pty Ltd, the nearby third-party plant, in line with the Company's agreement for processing bulk samples(ASX release on 21st June 2024).

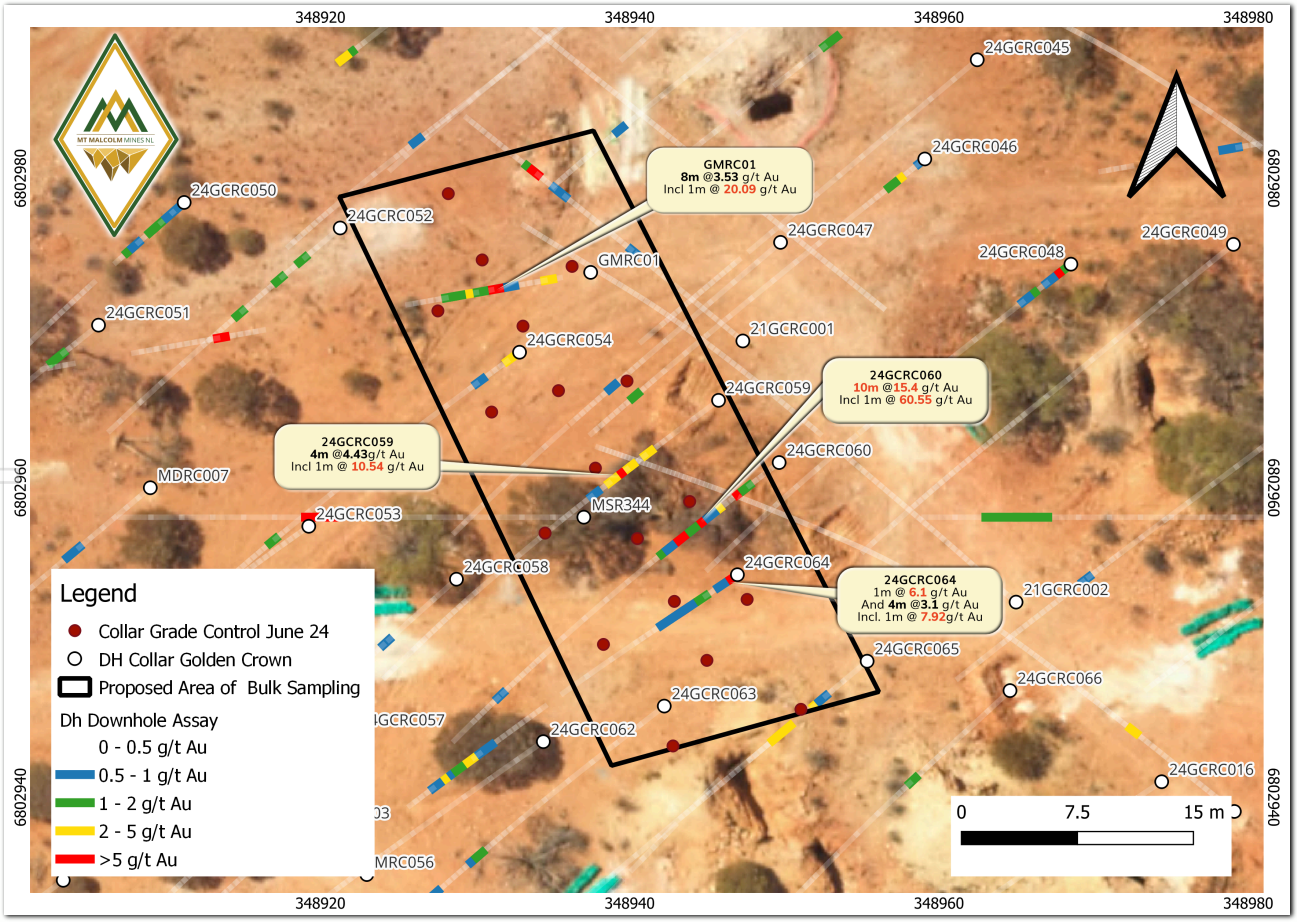


Figure 1: Map showing bulk sampling area and collars of grade control drilling.

Study Results of Sample Processing

The current study on sample processing aims to assess the economic viability of utilizing the wet gravity plant, providing essential insights into future resource development potential and mitigating risks associated with processing around 8,000 tonnes of high-grade material from the bulk sampling exercise.

After processing, recovery results varied from 34.7% (Batch B) to a high of 87.7% (Table 1 and Picture 1). The preliminary findings of the study indicate a significant correlation between higher average gold grades and enhanced recovery efficiency.

Sample Batch G, with an average grade of 41.32 g/t Au, achieved the highest recovery at 87.7%, despite its smaller sample size.

Sample Batch C, averaging 4.46 g/t achieved a recovery of 74.1%, indicating significant efficiency gains compared to batches with lower grades. This trend extends in Batches D and F, where recoveries of 77.5% and 71% respectively were achieved within average grades.

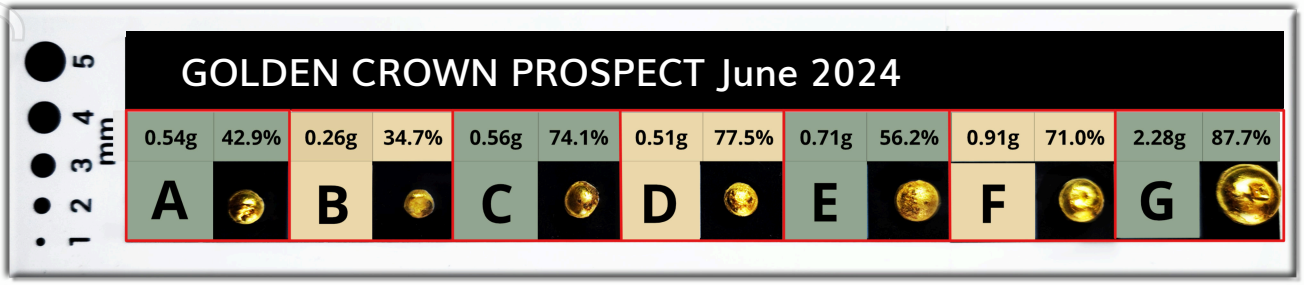
Batch E, which achieved 56.2%, is currently under investigation to understand the reasons for its variation from the recovery trend.

Sample Batch	Dry Weight (kg)	Average Grade Au (g/t)	Estimated Contained Au (g)	Recovered Au (g)	Recovered Au (%) *	Av. Au Recovery (%)
A	512.3	2.46	1.26	0.54	42.9	
B	229.1	3.26	0.75	0.26	34.7	
C	169.5	4.46	0.76	0.56	74.1	
D	107.9	6.10	0.66	0.51	77.5	**63.4**
E	133.5	9.46	1.26	0.71	56.2	
F	103.1	12.43	1.28	0.91	71	
G	62.9	41.32	2.60	2.28	87.7	
Total	**1318.3**		**8.57**	**5.77**		

Table 1: Results of the samples submitted for ongoing wet gravity processing study.

**Totals may vary due to rounding errors*

The study results reveal average gold recovery across all batches as 63.4%. Notably, batches with an average grade of 4 g/t Au and above demonstrated a higher average recovery of 73.3%. This trend highlights a strong correlation between higher average gold grades and improved recovery.



Picture 1: Recovered gold from sample processing, in grams and corresponding recovery percentages for each sample batch.

Sample Processing Techniques

In the current wet gravity sample processing study, RC samples obtained from drilling at Golden Crown in February 2024 were composited into seven batches based on their gold grade ranges: 2-3 g/t Au, 3-4 g/t Au, 4-5 g/t Au, 5-7 g/t Au, 7-9 g/t Au, 9-17 g/t Au, and greater than 17 g/t Au, designated as batches A to G respectively (ASX release on June 21, 2024). A total of 62 single-metre RC samples (green plastic bag sample), with an average weight of 22 kg, were composited to form these seven batches.

Batch A consisted of 23 single-metre samples, while Batch B contained 11 samples. Batch C included 8 samples, and Batch D had 5 samples. Similarly, Batch E comprised 6 samples, Batch F also had 5 samples, and Batch G contained 4 samples. Each sample was initially weighed, and its moisture content recorded. Due to high moisture content, a 10% weight reduction was applied to determine the dry weight of the samples.

These batches were individually loaded into a surge bin, and then fed through a controlled feeder into a hammer crusher. Here, they were further crushed into particles of 4 mm or smaller, aiming to liberate gold from the ore matrix. Subsequently, the crushed material underwent coarse gold recovery through a sluice system. This process utilized water flow and gravity to effectively separate gold from other materials based on their varying densities.

Following the sluicing stage, the processed material was directed through a wet screen to remove particles larger than 0.5mm before entering a hydro-cyclone for further processing. Within the hydro-cyclone, the material underwent separation: the heavier underflow was directed to a centrifugal force separator, specifically a

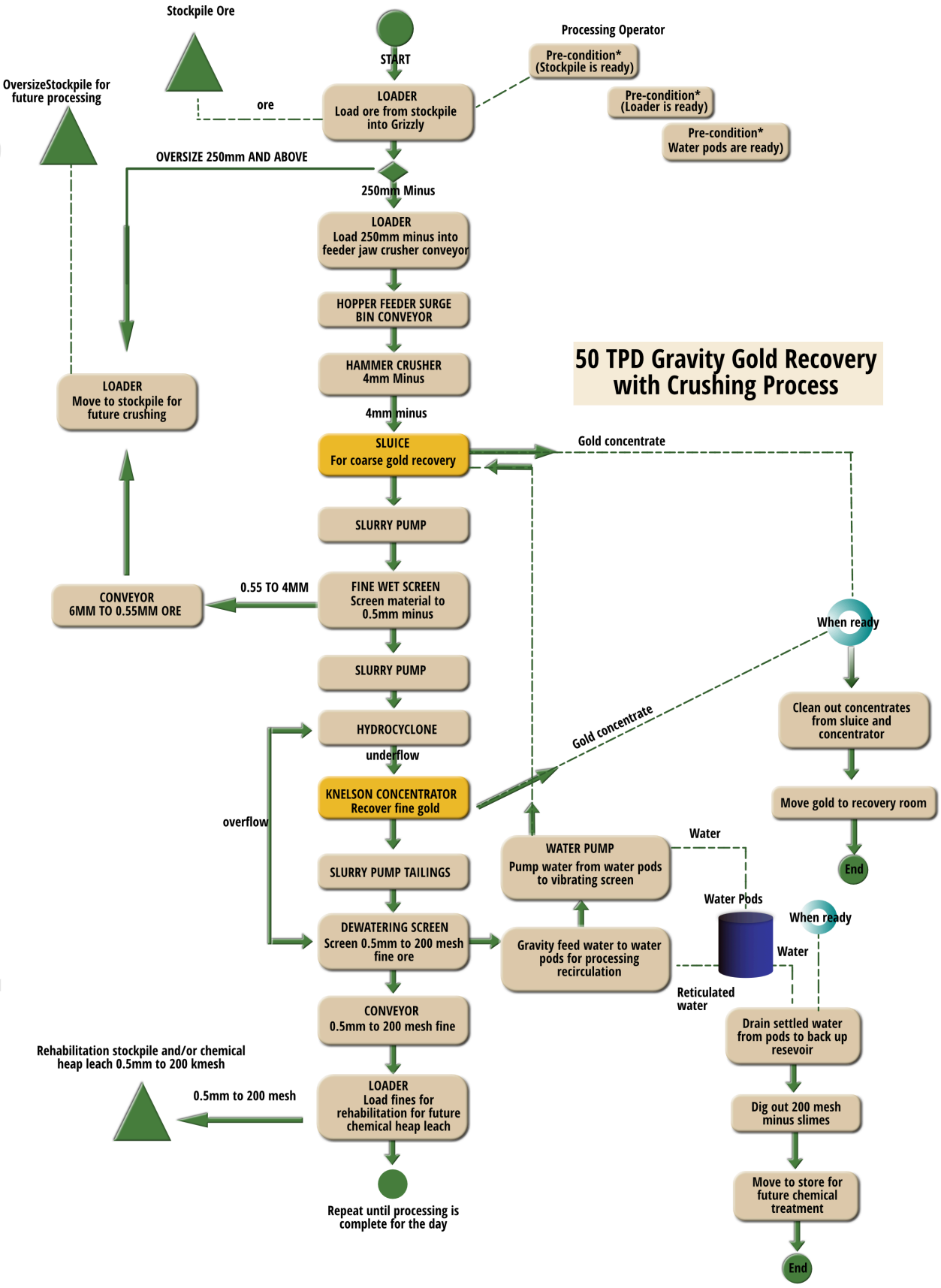


Figure 2: Wet gravity sample processing flowsheet.

Knelson concentrator, designed for the collection of fine gold particles.

Meanwhile, the lighter overflow from the hydro-cyclone goes to a dewatering screen (Figure 2).

This methodology was applied for the sample processing to ensure the effective separation and recovery of gold from the composite samples.

The material emerging from the dewatering screen ranged in size from 0.5 mm to 200 mesh. Any slurry finer than 200 mesh settled in water pods, contributing to the recovery of process water.

This systematic process was essential for evaluating the efficiency of gold recovery across different ore grades in the plant, providing critical insights for assessing economic feasibility and guiding the Golden Crown Prospect's future ore processing strategies.

In conclusion, the initial results of the sample processing study at Golden Crown indicate positive findings regarding gold recovery, reinforcing the prospect's economic potential. As the Company progresses with its bulk sampling and further exploration, these insights will play a pivotal role in shaping near future development strategies.

About Golden Crown

The Golden Crown gold prospect, with its rich historical significance and recent promising results, has become the Company's focal point for resource estimation and project development. The February 2024 RC drilling program has delineated a well-defined mineralized area, providing a solid foundation for robust maiden Mineral Resource Estimates.

Historically, Golden Crown has proven to be a significant producer, yielding 1,720 oz between 1899 and 1904. The Golden Crown gold prospect features three shallow lodes that remain open along the down plunge (Figure 2), with deeper mineralization still unexplored. Notably, there are 17 intercepts greater than 5 g/t Au, including 7 intercepts greater than 10 g/t Au, 5 intercepts greater than 15 g/t Au, and 3 intercepts greater than 30 g/t Au. This high-grade near-surface deposit is well-suited for low-impact, small-scale mining operations.

The Company completed 2,772 metres of RC drilling in Q1 2024 at Golden Crown and assay results showcased significant intercepts including highest recorded intersection of 6m @ 24.46 g/t Au and broad high-grade zone of 10m @ 15.40 g/t Au in drillhole 24GCRC060 (Refer M2M ASX release 13th March 2024 and 6th May 2024). Other important high-grade intercepts include:

- 4m @ 3.29 g/t Au (20-24m) in 24GCRC032
- 4m @ 5.23 g/t Au (22-26m) in 24GCRC033
- 3m @ 6.88 g/t Au (0-3m) in 24GCRC048
- 4m @ 4.43 g/t Au (14-18m) in 24GCRC059

In a recent re-assay of the historic hole GMRC01, the results showed 19.46 g/t Au at 12-13m.

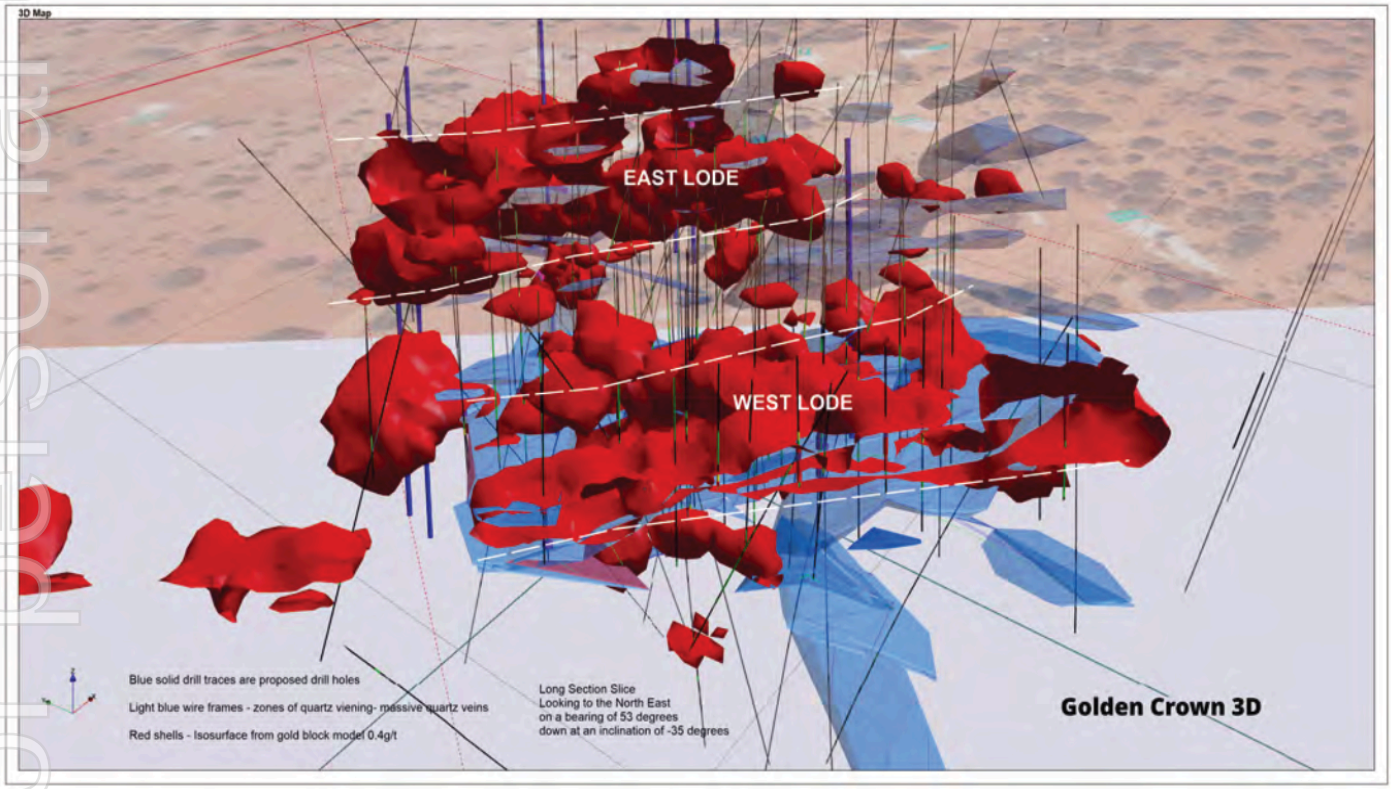


Figure 3: 3D view of Golden Crown gold mineralisation (isosurface 0.4 g/t Au).

The Company remains focused on resource estimation, conducting further metallurgical studies, and performing environmental assessments as it progresses to the next phase of exploration and development at the Golden Crown Prospect.

Competent Person Statement

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources is based on information compiled by Mr. Vivek Sharma, a Competent Person and a full-time employee of the company who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Vivek Sharma has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Vivek Sharma consents to the inclusion in the report of the matters based on the information compiled by him, in the form and context in which it appears.

Forward Looking Statements

Some of the statements appearing in this announcement may be forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which Mt Malcolm Mines NL operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside M2M's control. In relying on the above mentioned ASX announcement and pursuant to ASX Listing Rule 5.32.2, the Company confirms that it is not aware of any new information or data that materially affects the information included in the above-mentioned announcement.

This announcement has been authorised by the Board of Mt Malcolm Mines NL.

For further information please contact: -

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APPENDIX A

JORC 2012 TABLE 1 REPORT - GOLDEN CROWN PROSPECT

SECTION 1 - Sample techniques and Data

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

Criteria	Commentary
Sampling techniques	Reverse Circulation (RC) drill samples (24GCRC series), February 2024collected by M2M over 1m downhole intervals from beneath a cyclone attached to the rig. Typically, 3-4kg sub-samples were obtained via a stationary cone splitter attached to the underside of the cyclone. Sub-samples were collected in pre-numbered calico bags for submission to the analytical laboratory. For some holes a mixed sampling approach was adopted for the analysis, wherein 1-metre subsamples were selected based on logging criteria. Following this selection process, the remaining portions of the drillhole were composite samples, usually 4 metres. Samples were collected from the respective green bags using a spear, ensuring an even representation of the entire composition. The sampling techniques and methodologies used are deemed appropriate and industry standard for this style of exploration.
Drilling techniques	RC drilling was carried out using conventional, industry standard methodologies utilising a face-sampling hammer with bit shrouds. Drill bit diametres were typically 140-145mm. RC drilling was conducted by iDrillings truck-mounted Hydco 350RC 8x8 Atcross drill rig with a 600/700psi 1800cfrm air compressor with auxiliary and booster air compressors (when required). All recovered samples were dry and there were no wet samples. Drillholes were surveyed downhole by Axis Gyro.
Drill sample recovery	M2M sample collection utilised a stationary splitter attached to the underside of the rig's cyclone. A 3-4kg sub-sample was collected in calico bags for submission to the assay laboratory. The remaining sample is collected in plastic bags and stored on site for future reference. The cyclone and cone splitterwas flushed with compressed air at the end of each 6m drill rod. This process was maintained throughout the program. Recovery percentages were recorded and are considered to be good. Some parts of the drillholes were covered by compositing, usually 4 metres. Samples were composited from the respective green bags using a spear, ensuring a comprehensive representation of the entire composition. In the second round of resampling, the intervals of composite samples where gold values exceeded 0.3 g/t Au in the first phase were analysed individually by single metre. Collected samples are deemed reliable and representative of drilled material. No material discrepancy, that would impede a mineral resource estimate, exists between collected RC primary and sub-samples. No indication of sample bias is evident, nor has it been established. No relationship has been observed to exist between sample recovery and grade.

APPENDIX A cont.
JORC 2012 TABLE 1 REPORT - GOLDEN CROWN PROSPECT

Criteria	Commentary
Logging	All drill holes are geologically logged in their entirety at 1m intervals to the end of the hole. Drill hole data is either digitally or physically captured. Validated and standardisation are required prior to being uploaded to the Mt Malcolm data base. The level of logging detail is considered appropriate for exploration and is appropriate to support mineral resource estimation, mining studies, and metallurgical studies. M2M's qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture and grain size. Quantitative logging includes identification and percentages of mineralogy, sulphides, mineralisation and veining.
Sub-sampling techniques and sample preparation	M2M samples were collected at 1m down-hole intervals. Typically, a 3-4kg sub-sample split was obtained via a stationary cone splitter attached to the underside off the cyclone. Sampling methodologies are considered industry standard. Sub-samples were collected at the end of each day and transported to a secure location; the remaining residue (stored in plastic bags) are retained at a "bag farm" on site for future reference. Samples were kept dry by the use of auxiliary and booster compressors; no wet samples were encountered. Field duplicates, blanks and Certified Reference Material ("CRM") were periodically inserted into the M2M sample batches at a ratio of 1:33, 1:50 and 1:33 respectively. Sub sampling and sample preparation techniques are acceptable; results indicate reasonable and acceptable analytical repeatability. The QA/QC procedures implemented during the drill program is appropriate for this style of mineralisation and industry standard practice. Sample size and collection methodologies are considered appropriate for this style of gold mineralisation and as an industry accepted method for evaluation of gold deposits in the Eastern Goldfields of Western Australia. For the wet gravity sample processing study, individual metres of RC samples from the February 24 drilling were collected and composited to make seven samples. RC Samples in green plastic bags, with an average weight of 22 kg (A 10% reduction was applied to the original weight to calculate the dry weight of the samples) were composited for each grade range, resulting in seven classifications: 2 to 3 g/t Au, 3 to 4 g/t Au, 4 to 5 g/t Au, 5 to 7 g/t Au, 7 to 9 g/t Au, and 9 to 17 g/t Au. Additionally, there was a batch for samples with more than 17 g/t Au. These batches were respectively named A to G.
Quality of assay data and laboratory tests	Analysis of M2M samples was conducted at Intertek, Minerals, Perth. Samples were dried, crushed and totally pulverised (75um). Samples were be assayed for gold only using classical Fire Assay technique with OES finish on a 50 g subsample (0.01ppm Au detection limit). Field duplicates and Certified Reference Material, standards and blanks were regularly inserted into the sample batch. The laboratory also includes standards and blanks as part of their internal QA/QC control. Repeatability and standard results are within acceptable limits. No geophysical tools were used to determine any element concentrations. Historical analysis (Au, As, Cu, Pb, Zn) conducted by North was by Genalysis Laboratory services. Gold only analysis by Jubilee was conducted by Leonora-Laverton Assay Laboratory Pty Ltd. Gold only analysis, fire assay, conducted by Melita sourced Australian Assay Laboratories Group.

APPENDIX A

JORC 2012 TABLE 1 REPORT - GOLDEN CROWN PROSPECT

SECTION 1 - Sample techniques and Data

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

Criteria	Commentary
Verification of sampling and assaying	There is always a risk with legacy data that sampling, or assay biases may exist between results from different drilling programs due to different sampling protocols, different laboratories, and different analytical techniques. Samples were dispatched to Intertek, Kalgoorlie. Sample preparation included drying, crushing and pulverising. Analysis was via 50gram Fire Assay (OES). Standards, blanks and CRM results are within acceptable limits. No adjustment or calibration have been made to any of the assay data. Sampling and assay techniques are conducted at today's standard. In the past sampling and assaying were conducted to the standards of the day.
Location of data points	All GCRC drill hole collar location points were initially recorded by M2M using a handheld GPS and reported to datum GDA94 and UTM MGA94 zone 51 coordinate system, with horizontal accuracy to ±5m. January and February 2024 RC drill collars are recorded with a handheld GPS and recorded in the UTM MGA94 zone 51 coordinate system. Later, these collars were picked up by DGPS. All historical drill collar data has been converted to MGA94 UTM zone 51. Several historical drill hole collars have been visually verified in the field and were used as control points in conjunction with aerial photo confirmation.
Data spacing and distribution	Drill spacing and drill technique is sufficient to establish the degree of geological and grade continuity appropriate for any mineral resources and ore reserve estimation procedures and classifications applied. The mineralised systems remain open and additional infill or deeper drilling is required to close off and confirm the full extent of identified mineralisation, particularly at depth. Data acquired and processed is only being considered for exploration purposes.
Orientation of data in relation to geological structure	The sheared Malcolm greenstone sequence displays an NNE to NE lithological orientation with steeply dipping stratigraphy. Stratigraphy is disrupted by the development of NW, NNW, NS, EW and NE trending faulted shear systems which display a variety of fold styles ranging from open to isoclinal, in some cases the greenstone sequence has been overturned. The main outcropping quartz vein at Golden Crown is coincident with the position of the rhyolite-rhyodacite contact. WNW-dipping shear zones (thrusts) crosscut the vein and the external shear zone foliation merged with laminations in the quartz. These sections of laminated quartz were the only mined portions of the reef. There is also a significant change in the orientation of thrust shears as they track across reactivated contacts. It is considered that minimal sample bias has been introduced by sample orientation. No orientation sampling bias has been identified in the data thus far. Drilling and sampling programs are conducted generally orthogonal to the strike of the mineralisation, to obtain unbiased drill sample data. The regional geological structure is complex.

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JORC 2012 TABLE 1 REPORT - GOLDEN CROWN PROSPECT

Criteria	Commentary
Sample security	M2M samples are collected from the field daily; they were securely stored in a locked yard at Leonora and will be transported to the analytical laboratory by a local contractor. Once received by the laboratory, samples are checked against the field manifest, sorted, and prepared for assay. Samples were then processed and assayed under the supervision of the analytical laboratories. Once in the laboratories possession adequate sample security measures are assumed to be adopted. No sample security sample details are available for historical drilling and analysis.
Audits or reviews	Sampling methodologies, assay techniques and QA/QC protocols used in the various historic drilling programs are not as thoroughly documented when compared to today's current standards. Reviews of the various available historical company reports regarding drilling and sampling techniques indicate that they were conducted to industry standard practice of the day. In some cases, data is not well validated and confidence levels are low with respect to collar coordinates, assay and logging techniques and sampling procedures. Further audits or reviews are not considered necessary at this particular exploration stage.

Section 2 - Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	The Golden Crown tenement (M37/475) is located within the Shire of Leonora in the Mt Margret Mineral Field in the centre of the North Eastern Goldfields of Western Australia. The tenement is in good standing. M37/475 is held by Mt Malcolm Gold Holdings Pty Ltd, a wholly owned subsidiary of Mt Malcolm Mines NL. The tenements are managed and explored by Mt Malcolm Mines NL. The details of all Company tenements are disclosed in Annexure B "Solicitor's report on tenements" which was released by the company in its IPO Prospectus dated 2nd August 2021 "Mt Malcolm Mines NL CAN 646 466 435 Prospectus" as supplemented by a supplementary Prospectus dated 19th August 2021 (Prospectus). All gold production is subject to a Western Australian government royalty of 2.5%.

Section 2 - Reporting of Exploration Results

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

Criteria	Commentary
Exploration done by other parties	The Golden Crown tenement has been explored and drilled by a number of exploration and mining companies over numerous years dating back to the late 1980s, more active gold exploration companies include, Chevron, North Limited, Jubilee Gold Mines and Melita Mining NL. All have contributed to various exploration programs utilising a wide variety of standard exploration techniques. Exploration activities by these companies covered all aspects of mineral exploration with a particular focus on gold. On ground activities included geophysics, geochemistry, geological mapping, drill programs (RAB, Aircore, RC), sampling, structural interpretation and geological assessments. Historical reporting and descriptions of laboratory sample preparation, assay procedures and quality control protocols for the samples from the various drilling programs are variable in their descriptions and completeness. The drilling database has been assembled, interrogated and scrutinised to a satisfactory level however, in the majority of cases the data is historical and predates JORC 2012 compliance. It has not been possible to fully verify the reliability and accuracy of all portions of the data however it appears that no serious problems have occurred. Historical exploration techniques and reported mineralisation was conducted to the industry standards of the day.
Geology	The Project area is located 12km east of Leonora overlying altered mafic basalt/felsic volcanoclastic/sedimentary sequences of the Malcolm Greenstone Belt, including the Golden Crown sequence positioned within the greenstones of the Kurnalpi Terrain. Local lithologies are characterized by linear trending steeply dipping structures and highly sheared stratigraphy. Rock outcrop is evident, and the project area is located on a small hill. Structurally the area is intensely sheared and folded. Regionally gold mineralization is associated with lithological contacts hosted by NW, NNW & EW trending shear zones often associated with quartz veining. There are several old workings and open stopes evident at the Golden Crown prospect. The sequence from footwall to hanging wall is dacite, rhyolite, rhyodacite, basalt and andesitic andesite. Gold lodes represented by shallowly northeast - plunging shoots are focussed along the hanging wall of the rhyolite unit with a repetition within the overlying rhyodacite.
Drill hole Information	The location of drill hole collars is recorded in the company database and presented as part of the significant intersections in the body of this report. All hole depths refer to down hole depth in metres. Hole collars are quoted in the MGA94 Zone51 co-ordinate system. Drill hole depths are measured down-hole from the collar (top) of the hole to the bottom (end) of the hole.
Data Aggregation methods	No averaging of the raw assay data was applied. Raw data was used to determine the location, width of gold intersections and anomalous gold trends. Geological assessment and interpretation were used to determine the relevance of the plotted intersections with respect to the sampled medium.

Section 2 - Reporting of Exploration Results

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

Criteria	Commentary
Data Aggregation methods cont.	When drill holes are quoted individual grades are reported as down hole length weighted average grades. Only intersections greater than or close to 1.0g/t Au are regarded as significant and anomalous. Intersections > 0.5g/t Au are regarded as indicative of potential mineralisation; they are viewed as anomalous but not considered to be significant however they are useful as a guide to potential mineralisation trends and relevant to any surrounding mineralisation halo. Significant intersections (>1g/t Au) with no more than 1m of internal dilution are in the body of this report. No top cuts were applied to any assay values. There is no reporting of metal equivalent values.
Relationship between Mineralisation widths and intercept lengths	In general, the drill hole orientation may not be at an optimal angle to the strike of the greenstone sequence (NW-NNW) and the identified gold mineralisation. However, the majority of holes are orientated in a south westerly direction -60°/230°. Since the greenstone sequence is generally steeply dipping north northeast, drill intercepts are reported as downhole widths. As a result, the reported intersections do not necessarily represent true widths. Orientation and geometry of the mineralisation zones has been primarily determined by interpretation of historical drilling and geological modelling. The maximum and minimum sample width within the reported mineralised zones is 1m. Quoted intersections are length weighted averages. The recent grade control drillholes have been drilled vertically.
Diagrams	The example diagrams and plans are included in the body of this announcement.
Balanced Reporting	Only gold results regarded as significant or anomalous are discussed and reported and significant intercepts were reported through M2M ASX release 13th March 2024 and 6th May 2024.
Other Substantive exploration data	Regarding the results reviewed, no other substantive data is currently considered necessary. The project area has been explored by several listed companies in the past, only results regarded as substantial, by those companies, have been reported. All meaningful and material information is presented in this document. Further data collection will be reviewed and reported as and when considered material.
Further work	Conduct resource estimation using recent and historical drilling results. Comprehensive metallurgical studies, including gravity test work and cyanide leaching for different grind sizes. Waste rock characterization studies are planned to evaluate potential environmental impacts and implement sustainable waste management practices.