



ASX Announcement

CALYPSO DIAMOND DRILL EXPLORATION UPDATE

9 August 2022

Highlights

Calypso (P37/8792) Diamond Drilling has returned the following significant gold intersections from the lower remaining half of the mineralised section of 22CALDD003 to EOH, including:

- 22CALDD003 - 12.46m @ 2.41 g/t Au (272.84-285.30m) including 0.42m @ 9.19 g/t Au (275.76-276.18m) and 0.83m @ 10.97 g/t Au (280.04-280.87m).
- 8.85m @ 2.52 g/t Au (289-297.85m) including 0.88m @ 5.67 g/t Au (292.0-292.88m).
- 7.41m @ 1.88 g/t Au (310.0-317.41m) including 0.34m @ 10.75 g/t Au (317.07-317.41m).
- 1.06m @ 10.17 g/t Au (320.87-321.93m) including 0.38m @ 16.44 g/t Au (320.87-321.25m).
- 9.98m @ 0.51 g/t Au (325.02-335.00m) including 0.17m @ 4.74 g/t Au (325.02-325.19m) and 3.34m @ 4.56 g/t Au (327.66-331.00m).
- 0.99m @ 3.74 g/t Au (349.74-350.73m)

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Diamond Drilling - Calypso

Mt Malcolm Mines NL (ASX:M2M of "the Company") is pleased to provide an exploration update following recently received assay results from the remaining portion of re-entered Diamond Drill hole 22CALDD003 (268.76-363.8m EOH) at the flagship Calypso (P37/8792) prospect.

The results follow the Company's announcement on 29 July 2022 that only reported a portion of the upper segment of the drill hole 22CALDD003 (235.76-268.76m). Previously reported significant intersections from the upper portion of 22CALDD003 and nearby 22CALDD004 included:

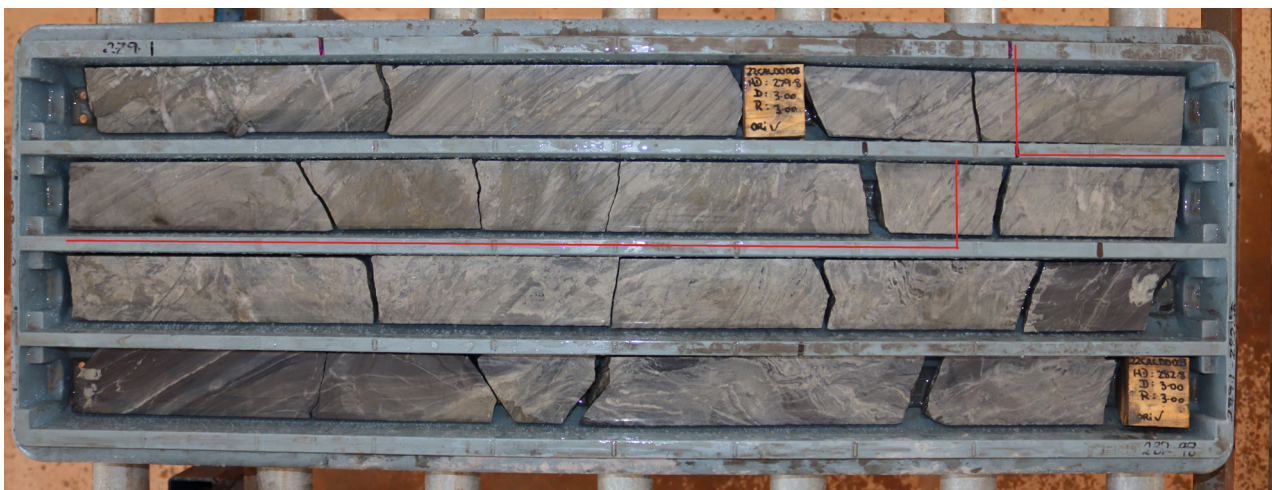
22CALDD003	10.27m @ 1.53 g/t Au (246.38-254.98m) Including 3.42m @ 2.66 g/t Au (248.51-252.03m).
22CALDD004	26m @ 1.97 g/t Au (261.55-287.55m) including 9.96m @ 2.97 g/t Au (263.90-273.57m) and 8.96m @ 2.06 g/t Au (278.59-287.55m).
	3.51m @ 3.96 g/t Au (293.44-296.95m).

Drill hole 22CALDD004 was collared 50m west of 22CALDD003

22CALDD003 was re-entered and extended by 100m following anomalous gold mineralisation returned from 22CALDD004. The final 100m of core (22CALDD003) returned 50m of consistent mineralisation then 50m of intermittent mineralisation to the end of hole (363.8m).

The diamond drilling (HQ3) program is on-going and as such only selected sections of 22CALDD003-004 have been assayed and processed whereas drillholes 22CALDD001-002 have been fully assayed and reported. A significant upper portion of 22CALDD003 and 22CALDD004 are still being geologically logged and marked up for sampling and therefore have not yet been assayed.

On Saturday 6th August, the diamond drill rig completed the sixth hole (22CALDD008) of the program into the Calypso high density gravity target 3 (refer ASX:M2M June Quarterly Report 2022). Drill hole 22CALDD008 is collared 50m south of 22CALDD003



22CALDD003 Sulphide replacement of magnetic sediment and quartz sulphide veining which returned 0.83m @ 10.97 g/t Au (280.04-280.87m). The position of the high-grade intercept is highlighted in red.

and targeted up-plunge extensions and mineralisation continuity previously defined in 22CALDD003 and 22CALDD004 to a target depth of 230m. The drill core from 22CALDD008 has not been assayed, the core is currently being geologically logged and marked up ready for sampling.

The lithologies at Calypso include a strongly deformed sedimentary sequence of magnetic siltstones, interbedded sandstone, shale and BIF that have been intruded by cross cutting quartz stockworks $\pm$ calcite and sulphide bearing felsic porphyry. Sulphide assemblages can be massive to semi-massive, they include pyrrhotite, pyrite and arsenopyrite with interspersed hydrothermal alteration zones. Magnetite has been replaced by intersecting schistosity and veining, resulting in sulfidation and intense sericite-silica alteration.

There is a range of sulphide phases and styles concentrated within multiple alteration zones across the entire mineralised interval that collectively constitute considerable width. A better understanding of the true width of mineralisation will be achieved through triangulating the geology between 22CALDD003, 22CALDD004 and the latest hole 22CALDD008.

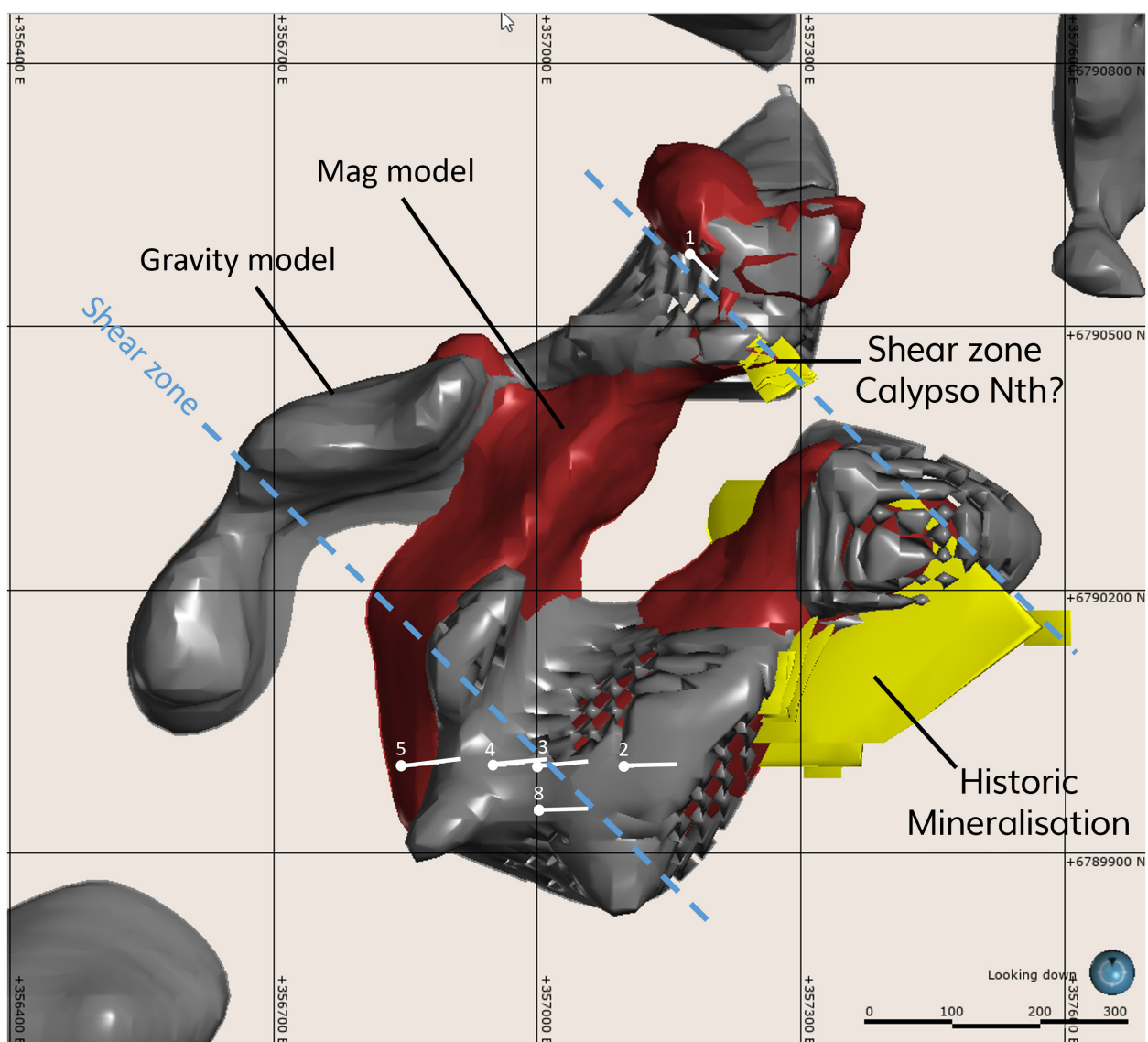


FIGURE 1

Exploration model. The gravity-magnetic anomaly delineates multiple fold closures, a finding confirmed by the sub surface geological plan. Existing mineralised intercepts coincide with shear zones intersecting the folded sedimentary package.

TABLE 1
Calypso Prospect - Significant Drill Intersections

Hole ID	Easting MGA 94	Northing MGA 94	Dip	Azim (TN)	Depth (m)	From (m)	To (m)	Width (m)	Grade (g/t Au)
22CALDD003	357000	6790000	-60°	085°	363.8	272.84	285.30	12.46	2.41
					incl.	275.76	276.18	0.42	9.19
					incl.	280.04	280.87	0.83	10.97
						289.00	297.85	8.85	2.52
					incl.	292.00	292.88	0.88	5.67
						310.00	317.41	7.41	1.88
					incl.	317.07		0.34	10.75
						320.87	321.93	1.06	10.17
					incl.		321.25	0.38	16.44
						325.02	335.00	9.98	0.51
					incl.		325.19	0.17	4.74
					incl.	327.66	331.00	3.34	4.56
						339.27	340.11	0.84	2.39
						342.45	342.70	0.25	4.25
						349.74	350.73	0.99	3.74
22CALDD004	356950	6790000	-60°	085°	327.80	304.66	304.68	0.2	1.69

Notes for reporting of significant intersections:

1. Drill hole collar coordinates in UTM, MGA94 Zone 51
2. Lower cutoff grade of 0.5 g/t Au.
3. No high cut applied.
4. Individual high grade assays (>4.0 g/t Au) reported separately.
5. Maximum of 2.00 meters of internal sub-grade (<0.5 g/t Au) material included.
6. Down hole widths reported. True widths not determined.
7. Analysis by 50g Fire Assay, ASS finish.

The latest assay results have confirmed two styles of mineralisation at Calypso.

- Sulphide replacement of magnetic sediment and felsic porphyry
- Mineralised quartz-carbonate-sulphide veins

Further announcements regarding diamond drilling progress is expected this quarter.

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

For further information please contact:-

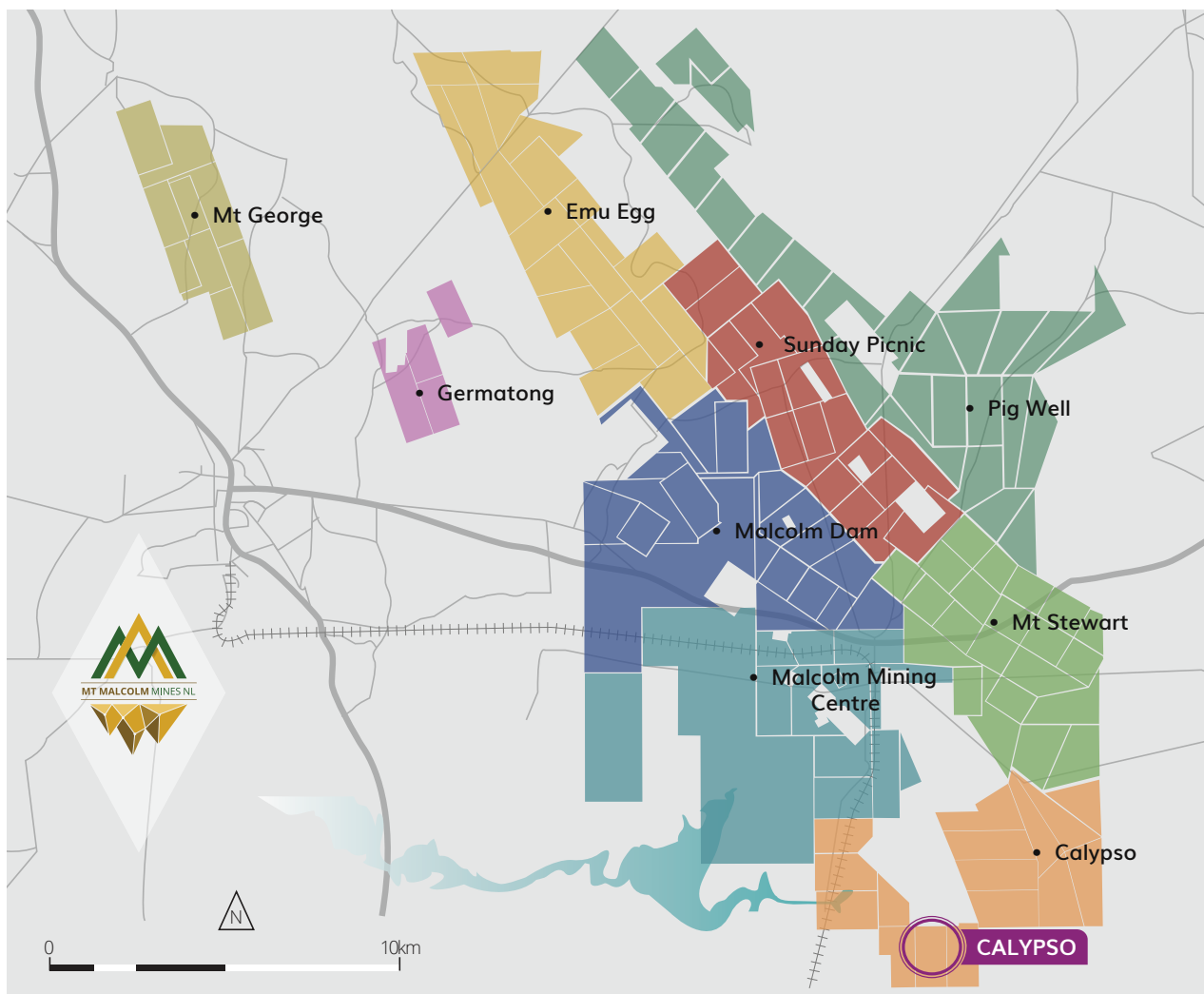
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Competent Persons Statement

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Paul Maher, a Competent Person and a full-time employee of the company who is a Member of The Australasian Institute of Mining and Metallurgy in addition to being a shareholder in the company. Mr. Paul Maher 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. Paul Maher 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.'



About Mt Malcolm Mines NL:

Mt Malcolm Mines NL is managed by competent and experienced industry professionals with a strong background in mineral exploration and administration of mineral assets. Additionally, the company has many professional associations with and access to some of the industry's best corporate and mining resource consultants.

The projects and properties are in areas with a proven track history of exploration success and significant mining and production of gold and other minerals. The holdings are centred around the locale of Malcolm near Leonora WA. The Company believes that its prospects offer excellent potential for the discovery of new economic mineral deposits and within the next (2) two years intends to:

- Conduct regional geological mapping and geochemical sampling programs.
- Undertake focused and systematic exploration and scientific research programs.

- Aggressively seek exploration and development opportunities of other targets and quality projects that meet the Mt Malcolm Mines development objectives and where appropriate and if opportunities arise, examine the possibilities of joint ventures and other related business and commercial opportunities that will create value and wealth for all its shareholders.

The Mt Malcolm Gold Project has the potential to host economic gold mineralisation and opportunities exist to further enhance and build on the substantial exploration data assembled to date. The project represents a large-scale district gold play.

JORC 2012 TABLE 1 Mt MALCOLM MINES NL (CALYPSO PROJECT)

SECTION 1 - Sample Techniques and Data

Criteria	Commentary
<i>Sampling techniques</i>	Diamond core (DD) drill samples were collected over numerous 1m and <1m meterage's, depending on geological lithological contacts. On very rare occasions the sample interval exceeded the nominal 1m width. Sample intervals predominantly coincided with geological contacts. Diamond core samples are HQ3 in size diameter. Core was measured and longitudinally cut in half with a diamond core cutting saw centred over a cradle holding the core in place. Core sample intervals varied from HQ cored 0.1m to 1m downhole intervals. Approximately 55% of all samples were <1m in length due to geological boundary constraints. Samples were collected in pre-numbered calico bags for submission to the analytical laboratory. The remaining core is stored on site in Leonora. All samples were collected dry. The sampling techniques and sampling methodologies employed are deemed appropriate and comply with industry standard for this style of exploration.
<i>Drilling techniques</i>	Diamond drilling techniques are conventional, industry standard practice. Diamond drilling was conducted using industry standard "Q" wireline techniques with core retrieved from the inner tubes and placed in core trays as drilled. Core size is standard HQ3 size (61-64mm) At the end of the 3m core run the core was retrieved and the driller placed core blocks in the core tray with the core blocks marked with hole ID and the depth. Core recovery was generally good, in the majority of cases 100%. Core recovery was measured for each core run. Some of the drill holes deviated slightly.
<i>Drill sample recovery</i>	Core recovery was recorded in the site geologists drill logs for most of the diamond drilling however some core is still being processed. A review of the data indicates good core recovery. In shallow broken ground lesser recoveries were recorded however very good recovery was returned over zones of mineralisation. Recovery percentages were recorded and are deemed appropriate and overall considered acceptable for resource estimation. Collected samples are considered reliable and representative of drilled material. No material discrepancy, that would impede a mineral resource estimate, exists between collected primary 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.
<i>Logging</i>	Diamond core logging was conducted once M2M personnel had retrieved the core trays from the drill rig site. Core was collected from the Calypso drill site on a daily basis. The entire length of every drill hole is logged. Diamond logging is confined to geological contacts. Recorded data contained in the drill logs includes rock type, magnetic susceptibility, alteration, structure, texture, mineralisation, sulphide content, weathering and other features. Drillhole collar coordinates, azimuth, dip, depth, sample intervals, geotechnical data, RQD and core recoveries are also recorded. Qualitative logging includes classification and description of lithology, weathering, oxidation, colour, texture, and grain size. Quantitative logging includes identification and percentages of mineralogy, structural measurements, sulphide content, mineralisation, and veining. Drill core is photographed, tray by tray prior to cutting and sampling and again after cutting and sampling.

Criteria	Commentary
	All information collected on site is electronically stored on portable laptop computers, validated, and then transferred to the M2M database. The level of logging detail is considered appropriate for exploration and to support appropriate mineral resource estimation, mining studies and metallurgical studies.
<i>Sub-sampling techniques and sample preparation</i>	Sampling methodologies are consistent with the industry standard. Core samples collected for analysis were longitudinally cut in half using a powered diamond core saw centred over a cradle holding the core in place. Half core samples generally varied in length from 0.2m to 1m. On 13 occasions the sample width exceeded 1m but never >1.43m. On 9 occasions the sample width was <0.2m 1m but never <0.12m Approximately 55% of all samples were <1m in length due to geological boundary constraints. The remaining half core is retained and stored in core trays in Leonora. Blanks and certified standard material was periodically inserted into the sample batches (approximately 1 in 20). Sub sampling and sample preparation techniques are considered to be acceptable. Results indicate reasonable and acceptable analytical repeatability. The QA/QC procedures implemented during the drill program are considered to be today's 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.
<i>Quality of assay data and laboratory tests</i>	Analysis of sample was conducted by SGS Laboratories in Kalgoorlie. Samples were dried (105°), crushed (nominal 6mm) and pulverised (85% passing 75µm). The samples were assayed for gold only using a 50 gram Fire Assay technique with AAS finish with a 0.01ppm detection limit. Certified Reference Material, standards and blanks are regularly inserted into the sample batch. The laboratory also included 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.
<i>Verification of sampling and assaying</i>	No adjustment or calibrations have been made to any of the assay data. Sampling and assay techniques are conducted at today's industry standard.
<i>Location of data points</i>	Drill hole collars were recorded using a handheld GPS and reported to the MGA94 UTM zone 51 coordinate system, with horizontal accuracy to ±3m.
<i>Data spacing and distribution</i>	The drill hole and sampling spacing is project specific; the drilling patterns employed in the past were dependent on previous drilling and/or geological interpretation/targeting depending on the nature and style of the mineralisation being tested. The sample spacing is considered close enough to identify any significant zones of gold mineralisation. The drill program is a follow up/ongoing exploration exercise that was designed to identify areas of geological interest and to confirm existing known mineralisation at the Calypso (P37/8792) prospect. Closer spaced diamond drilling on surrounding cross sections and follow up diamond drilling is required to further delineate the extent, size and geometry of some areas within identified zones of gold mineralisation. Drill spacing and the 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 however the mineralised systems remain open and additional infill or deeper drilling would be 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.

Criteria	Commentary
<i>Orientation of data in relation to geological structure</i>	The sheared Calypso sedimentary greenstone sequence displays an NNW to NW 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 sequence has been overturned. The regional geological structure is considered to be complex. The chance of sample bias introduced by sample orientation is considered minimal. No orientation sampling bias has been identified in the data thus far. Drilling and sampling programs are conducted to obtain unbiased locations of drill sample data, generally orthogonal to the strike of the mineralisation.
<i>Sample security</i>	Core trays were collected from the drill site on a daily basis. Once core was collected from site trays were securely stored in a locked yard at Leonora. The core was then processed, marked-up and logged prior to dispatching it to the core cutting facility. Sampled cut core was retrieved daily and returned to the locked Leonora yard then dispatched to the analytical laboratory in Kalgoorlie. 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 laboratory (SGS Kalgoorlie). Once in the laboratories possession adequate sample security measures are assumed to be adopted.
<i>Audits or reviews</i>	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 the best practice of the day however some data is poorly validated and confidence levels are questionable regarding collar co-ordinates, assay and logging techniques and sampling procedures. Further audits or reviews are not considered necessary at this particular stage of exploration.

SECTION 2 - Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	The Mt Malcom Project's Calypso tenement 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 holding is positioned in the NW corner of the Yerilla (3239) 1:100,000 scale GSWA map. The Calypso prospect is located on P37/8792. The tenement is in good standing. The tenement is held by Mt Malcolm Gold Holdings Pty Ltd a wholly owned subsidiary of Mt Malcolm Mines NL. The tenement is managed and explored by Mt Malcolm Mines NL (M2M). 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%

Criteria	Commentary
Exploration done by other parties	The Calypso tenements have been explored and drilled by a number of exploration and mining companies over numerous years dating back to the early 1980s, more active gold exploration companies include, BHP Minerals Division Exploration Department (1984-1988), North Ltd (1995-97) and most recently Torian Resources Ltd. Other companies include Occidental Minerals (1979), Valiant Consolidation Ltd-Union Oil Development Company (1983-86), Minplex Resources Pty Ltd-Anglo Consolidated Pty Ltd (1986 & 1997-98), Lake Raeside NL (1996), Ashton Gold (1992) and Aurora Gold Ltd (1994). All have contributed to various exploration programs utilising a wide variety of standard techniques. Historical exploration activities by these companies comprised all aspects of mineral exploration with a particular focus on gold. On ground activities include geophysics, geochemistry, geological mapping, drill programs (RAB, Aircore, RC and diamond), sampling, structural interpretation, resource evaluations and various 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 portions of the data however it appears that no serious problems have occurred. Historical exploration techniques and reported mineralisation was, at the time, conducted to the standards of the day.
Geology	The Project area is located 25km east of Leonora in the North-eastern Goldfields overlying segments of the altered mafic basalt/felsic volcanoclastic/sedimentary sequences of the Malcolm Greenstone Belt, including the Calypso sedimentary sequence positioned within the greenstones of the Kurnalpi Terrain. Local lithologies are characterised by linear trending steeply dipping structures and highly sheared structurally complex sedimentary stratigraphy. The area is regarded as structurally complex with NW shear zones and both EW and NS fold axial traces however at this stage of exploration its unknown how the interference of these two-fold sets has influenced lithological patterns at Calypso. Geological evidence suggests that prominent E-SW and NW trending fault zones truncate the fold pair. Rock outcrop is non-existent and the project area is covered by sand dunes and recent sediments related to the nearby Lake Raeside. Structurally the area is intensely sheared and folded. Lithologies within the strongly deformed sedimentary sequence include magnetic siltstones, interbedded sandstone, shale and BIF that have been intruded by cross cutting quartz stockworks ± calcite and sulphide bearing felsic porphyry. Sulphide assemblages can be massive to semi-massive they include pyrrhotite, pyrite and arsenopyrite with interspersed hydrothermal alteration zones. Magnetite has been replaced by intersecting schistosity and veining, resulting in sulfidation and intense sericite-silica alteration. Regionally gold mineralisation is associated with lithological contacts hosted by NW, NNW & EW trending shear zones often associated with quartz veining. At Calypso mineralisation is focused on faulted or sheared contacts between magnetite rich siltstone, BIF and other sedimentary facies including sandstone, chloritic siltstone, felsic porphyry and related intense quartz-carbonate alteration with or without sericite, pyrrhotite and pyrite. There are no old workings evident at the Calypso prospect.

Criteria	Commentary
<i>Drill hole Information</i>	The location of drill hole collars is recorded in the company database and presented as part of the significant intersection table 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 from the collar (top) of the hole to the bottom (end) of the hole.
<i>Data Aggregation methods</i>	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. When drill holes are quoted individual grades are reported as down hole length weighted average grades. Only intersections greater than or close to 0.5 g/t Au are regarded as significant or anomalous. Intersections < 0.5g/t Au are regarded as indicative of potential mineralisation but are not viewed as anomalous nor considered to be significant however they are useful as a guide to potential mineralisation trends and relevant to any surrounding mineralisation halo. The significant intersections are tabled in the body of this report. No top cuts were applied to any assay values. There is no reporting of metal equivalent values.
<i>Relationship between Mineralisation widths and intercept lengths</i>	In general, the drill hole orientation may not be at an optimal angle to the strike of the local sedimentary greenstone sequence (NW-NNW) and the identified gold mineralisation. However, all the diamond holes are orientated in an easterly direction. Since the greenstone sequence is generally steeply dipping, drill intercepts are reported as downhole widths. As a result, the reported intersections do not represent true widths. Orientation and geometry of the anomalous zones has been primarily determined by interpretation field observations and orientation of historical drilling. The maximum and minimum sample width within the reported mineralised zones range between 0.13m and 1.02m. Quoted intersections are weighted averages.
<i>Diagrams</i>	Type example plans of the exploration model (gravity-magnetic anomaly) and a photograph of half core from 22CALDD003 is included in the body of this announcement.
<i>Balanced Reporting</i>	Only gold results regarded as significant or anomalous are discussed and reported, generally samples assaying > 0.5 g/t Au which represents a low order grade are referred to in the table of significant intersections
<i>Other Substantive exploration data</i>	Regarding the results reviewed no other substantive data is currently considered necessary. However, the project area has been explored by several listed companies in the past, only results regarded as substantial, by those companies, have been reported in the past. All meaningful and material information is presented in this document. Further data collection will be reviewed and reported as and when considered material.
<i>Further work</i>	The potential to increase the existing zones of mineralisation is viewed as probable, however committing to further exploration work does not guarantee that further delineation of the extent, size and geometry of some areas within identified zones of gold mineralisation will be the result. Planned future work at the Calypso project includes exploration RC and/or diamond drilling, sampling, database consolidation, on ground truthing, geophysical interpretation, petrology and geological investigation.