



ASX Announcement

27 September 2019

New high grade gold zones at Mallina

Significant new high grade and shallow gold zones intersected in aircore drilling;

40m @ 3.9g/t Au from 8m incl **8m @ 9.2g/t Au** and **12m @ 5.6g/t Au** in MLAC037

28m @ 2.6g/t Au from 40m incl **4m @ 5.4g/t Au** in MLAC052

32m @ 1.6/t Au from 16m incl **4m @ 5.8g/t Au** in MLAC066

20m @ 1.7g/t Au from 4m incl **8m @ 3.4g/t Au** in MLAC041

New gold zones discovered 3km to west;

8m @ 1.1g/t Au from 20m in MLAC101

8m @ 0.6g/t Au from 52m in MLAC098

Resource potential substantially enhanced - all new zones are outside resource areas.

Gold corridor now extended to +7km in strike length and remains open.

Follow-up RC and aircore programs currently underway.

Andy Beckwith, Technical Director commented:

"The new aircore drilling results are very encouraging and support our aggressive drilling campaign aiming to substantially increase resources.

These new gold zones represent wide zones of new mineralisation well outside of the existing resource and importantly at shallow depths. The along strike potential remains open and follow-up aircore and RC drilling programs are already underway at Mallina, as they have the capacity to materially increase resources.

Drilling for the remainder of 2019 will focus on resource extensions at Mallina, Withnell and Toweranna as our highest priority, together with a substantial aircore drilling program targeting new discoveries along the major highly prospective shear zones and intrusive targets in our large Pilbara Gold Province land position."

De Grey Mining Limited (ASX: DEG, “De Grey”, “Company”) is pleased to announce an update on encouraging aircore drilling results from the Mallina deposit. Mallina has a defined gold resource of 3.83Mt @ 1.3g/t for 160,700oz* based on drilling to July 2018 and is hosted within a 7km long portion of the large regional scale Mallina Shear Zone. The deposit and surrounding targets have substantial exploration upside and are located only 15km from the Withnell deposit. (*ASX release “2019 Total Gold Mineral Resource – 21% increase to 1.7Moz”, 16 July 2019).

A program of widely spaced aircore drilling comprising 104 holes, totalling 6,305m, was recently completed at Mallina. Drilling was undertaken on lines 200-400m apart, with holes spaced 40m on section. The drilling targeted new SAM geophysical targets and structural interpretation beneath the thin veneer of transported cover. Two sections were drilled 1.8km and 3.0km west of the Mallina resource area with holes at 80m intervals, along an interpreted extension of the Mallina Shear Zone corridor based on aeromagnetism.

Table 1 provides a listing of all results (>2gm*m) and Figure 1 and 2 provides a summary of the new drilling results.

New gold lodes defined in widespaced aircore drilling

Several new lodes have been discovered in the recent shallow aircore drilling program which provides highly encouraging wide and high grade gold mineralisation well outside the current resource areas. The new lodes demonstrate the potential for Mallina to host multiple sub-parallel lodes within a 700m wide corridor.

The discovery of the new lodes is encouraging as it provides potential to substantially increase resources. In many cases, the new aircore intersections are open for at least several hundred metres along strike.

Results for four metre composite sampling of the aircore drilling are given below.

40m @ 3.9g/t Au from 8m incl **8m @ 9.2g/t Au** and **12m @ 5.6g/t Au** in MLAC037
28m @ 2.6g/t Au from 40m incl **4m @ 5.4g/t Au** in MLAC052
32m @ 1.6/t Au from 16m incl **4m @ 5.8g/t Au** in MLAC066
20m @ 1.7g/t Au from 4m incl **8m @ 3.4g/t Au** in MLAC041
24m @ 0.9g/t Au from 0m in MLAC080

Strong gold mineralisation discovered 3km to the west

A fence of aircore drilling 1.8km west and along strike of all previous drilling intersected **8m @ 1.1g/t Au**. This is interpreted to be an extension of the Mallina mineralised corridor. This result is complimented by other anomalous intercepts (**4m @ 0.53g/t Au from 16m** and **8m @ 0.64g/t Au from 52m** in MLAC098) on the same section, in addition to **4m @ 0.3g/t** a further 1.2km to the west again. These new results extend gold mineralisation an additional 3km to the west, increasing the prospective mineralised corridor to 7km long x 700m wide and remains open along strike.

Resource extension potential grows

The Mallina resource (3.83Mt @ 1.3g/t for 160,700oz*) is based on drilling to July 2018, with drilling since this date continuing to highlight new mineralisation along strike and at depth from the known lodes, including previously reported **56m @ 3.0g/t**, **16m @ 3.0g/t** and **13.4m @ 5.1g/t**. The discovery of multiple new lodes in widespaced aircore drilling is very encouraging. Additional follow-up drilling has been bought forward including approximately +5,000m of aircore and 1,500m of RC drilling. The RC drilling rig has already commenced detailed drilling across the newly defined lodes. The additional aircore drilling program is expected to commence later this week to extend and better define the trend of the lodes along strike prior to further follow-up RC drilling.

For further information:

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Competent Person Statements

The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Mr. Phil Tornatora, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy. Mr. Tornatora is a consultant to De Grey Mining Limited. Mr. Tornatora 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 Resource and Ore Reserves". Mr. Tornatora consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Figure 1 Mallina – New gold lodes defined by widespaced aircore drilling

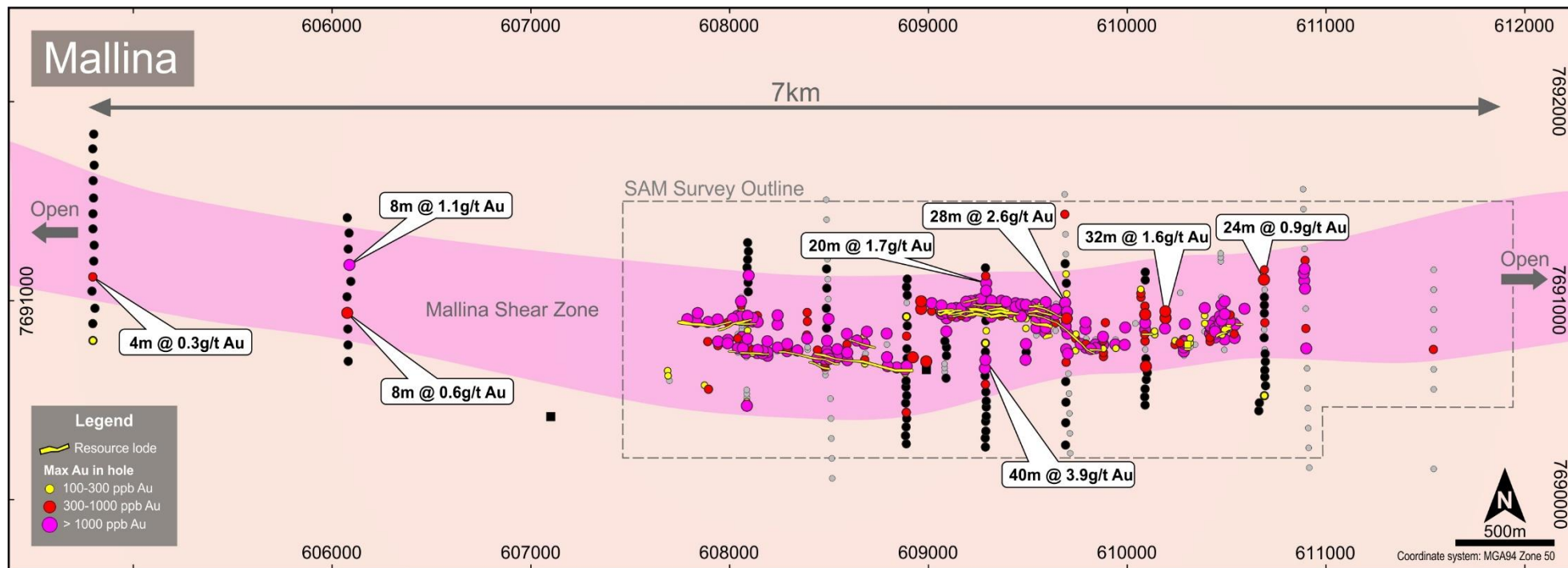


Figure 2 Mallina – Cross section 609290E, showing new gold zones north and south of existing resource area.

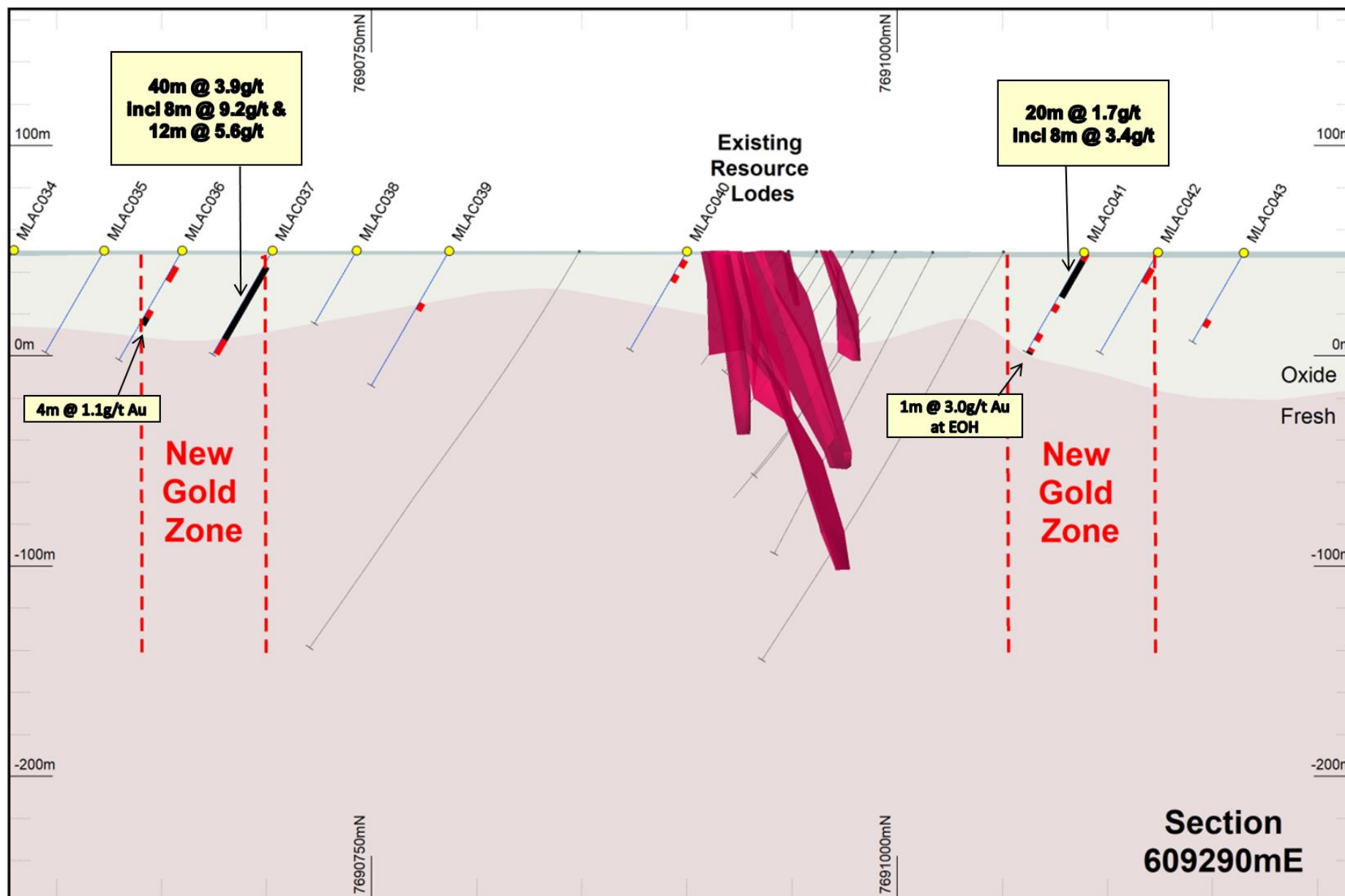


Table 1 Significant Drill Intersections (>2 gram x m)

HoleID	Depth From (m)	Depth To (m)	Downhole Width (m)	Au (g/t)	Collar East (GDA94)	Collar North (GDA94)	Collar RL (GDA94)	Dip (degrees)	Azimuth (GDA94)	Hole Depth (m)
MLAC003	4	8	4	1.1	608095	7691127	49	-60	180	36
MLAC016	52	56	4	0.9	608888	7690439	50	-60	180	70
MLAC023	40	48	8	1.0	608921	7690716	50	-60	180	80
MLAC036	36	40	4	1.1	609283	7690660	50	-60	180	60
MLAC037	8	48	40	3.9	609286	7690703	50	-60	180	57
incl	24	32	8	9.2	609286	7690703	50	-60	180	57
incl	36	48	12	5.6	609286	7690703	50	-60	180	57
MLAC041	4	24	20	1.7	609290	7691089	49	-60	180	55
incl	12	20	8	3.4	609290	7691089	49	-60	180	55
MLAC041	54	55	1	3.0	609290	7691089	49	-60	180	55
MLAC044	28	36	8	1.2	609488	7690703	50	-60	180	48
MLAC046	12	28	16	0.6	609490	7690783	50	-60	180	71
MLAC046	60	68	8	0.4	609490	7690783	50	-60	180	71
MLAC052	40	68	28	2.6	609687	7690990	50	-60	180	80
incl	64	68	4	5.4	609687	7690990	50	-60	180	80
MLAC060	16	20	4	1.6	610093	7690670	50	-60	180	60
MLAC066	16	48	32	1.6	610192	7690913	50	-60	180	63
incl	40	44	4	5.8	610192	7690913	50	-60	180	63
MLAC067	20	28	8	0.4	610191	7690947	50	-60	180	31
MLAC080	0	24	24	0.9	610687	7691106	49	-60	180	34
MLAC098	16	20	4	0.5	606076	7690939	50	-60	180	80
MLAC098	52	60	8	0.6	606076	7690939	50	-60	180	80
MLAC101	20	28	8	1.1	606087	7691180	50	-60	180	74

JORC Code, 2012 Edition – Table 1
 Section 1 Sampling Techniques and Data
 (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> All drilling and sampling were undertaken in an industry standard manner Aircore samples were collected by spear from 1m sample piles and composited over 4m intervals. The independent laboratory pulverises the entire sample for analysis as described below
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.). 	<ul style="list-style-type: none"> Aircore holes were drilled with an 83mm diameter blade bit.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Aircore samples were visually assessed for recovery. Samples are considered representative with generally good recovery. No sample bias is observed
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> The entire hole has been geologically logged by Company geologists Aircore sample results are to be used as a guide for more detailed RC drilling.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> • Aircore samples were collected by spear from 1m sample piles and composited over 4m intervals. • Industry prepared independent standards are inserted approximately 1 in 20 samples. • Each sample was dried, split, crushed and pulverised. • Sample sizes are considered appropriate for the material sampled. • The samples are considered representative and appropriate for this type of drilling • Aircore samples are generally of good quality and appropriate for delineation of geochemical trends but are not generally used in resource estimates.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<ul style="list-style-type: none"> • The samples were submitted to a commercial independent laboratory in Perth, Australia. • Aircore samples were analysed for Au using 25g aqua regia extraction with ICPMS finish and multi-elements by ICPAES and ICPMS using aqua regia digestion • The techniques are considered quantitative in nature. • As discussed previously certified reference standards were inserted by the Company and the laboratory also carries out internal standards in individual batches • The standards and duplicates were considered satisfactory
Verification of sampling and assaying	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> • Sample results have been merged by the company's database consultants • Results have been uploaded into the company database, checked and verified • No adjustments have been made to the assay data. • Results are reported on a length weighted basis
Location of data points	<ul style="list-style-type: none"> • Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> • Aircore hole collar locations are located by handheld GPS to an accuracy of 3m. • Locations are given in GDA94 zone 50 projection • Diagrams and location table are provided in the report • Topographic control is by detailed airphoto and Differential GPS data.
Data spacing and distribution	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied. 	<ul style="list-style-type: none"> • Drilling is on a nominal 200 x 40m to 1200 x 80m grid spacing for aircore. • All holes have been geologically logged and provide a strong basis for geological control and continuity of mineralisation. • Sample compositing has not been applied except in reporting of drill intercepts, as described in this Table
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is 	<ul style="list-style-type: none"> • The drilling is approximately perpendicular to the strike of mineralisation and therefore the sampling is considered representative of the mineralised zone. • In some cases, drilling is not at right angles to the dip of mineralised structures and as such true widths are less than downhole widths. This will be allowed for in resource estimates

Criteria	JORC Code explanation	Commentary
	<i>considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	when geological interpretations are completed.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples were collected by company personnel and delivered direct to the laboratory via a transport contractor
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits have been completed. Review of QAQC data has been carried out by database consultants and company geologists.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area. 	<ul style="list-style-type: none"> Mallina is on E47/3504 and is located approximately 80km south of Port Hedland. The tenements are held by Indee Gold Pty Ltd, which is a 100% subsidiary of De Grey Mining.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The Mallina prospect includes small scale historic mining and has had previous drilling undertaken over a period of many years. Most previous work was completed by Resolute, North West Non Ferrous and more recently by De Grey Mining.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The mineralisation targeted is hydrothermally emplaced and sediment/quartz hosted gold mineralisation within a shear zone and is similar in style to many other Western Australian gold deposits.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> Drill hole location and directional information provide in the report.
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths 	<ul style="list-style-type: none"> Results are reported to a minimum cutoff grade of 0.3g/t gold for Mallina with an internal dilution of 4m for aircore. Intervals over 0.5g/t Au and 2gm metal content are reported. Intercepts are length weighted averaged. No maximum cuts have been made.

Criteria	JORC Code explanation	Commentary
	<p><i>of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <ul style="list-style-type: none"> • <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i> 	<ul style="list-style-type: none"> • The drill holes are interpreted to be approximately perpendicular to the strike of mineralisation. • Drilling is not always perpendicular to the dip of mineralisation and true widths are less than downhole widths. Estimates of true widths will only be possible when all results are received, and final geological interpretations have been completed.
Diagrams	<ul style="list-style-type: none"> • <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i> 	<ul style="list-style-type: none"> • Plans and sections are provided in the report.
Balanced reporting	<ul style="list-style-type: none"> • <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i> 	<ul style="list-style-type: none"> • All significant results are provided in this report. • The report is considered balanced and provided in context.
Other substantive exploration data	<ul style="list-style-type: none"> • <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i> 	<ul style="list-style-type: none"> • The Mallina Gold deposit has an existing 2012 JORC gold resource of 160,700oz recently reported by De Grey.
Further work	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Programs of follow up RC and diamond drilling aimed at extending resources at depth and laterally are being planned or are underway. • Follow up aircore drilling will be undertaken to test for strike extensions to mineralisation.