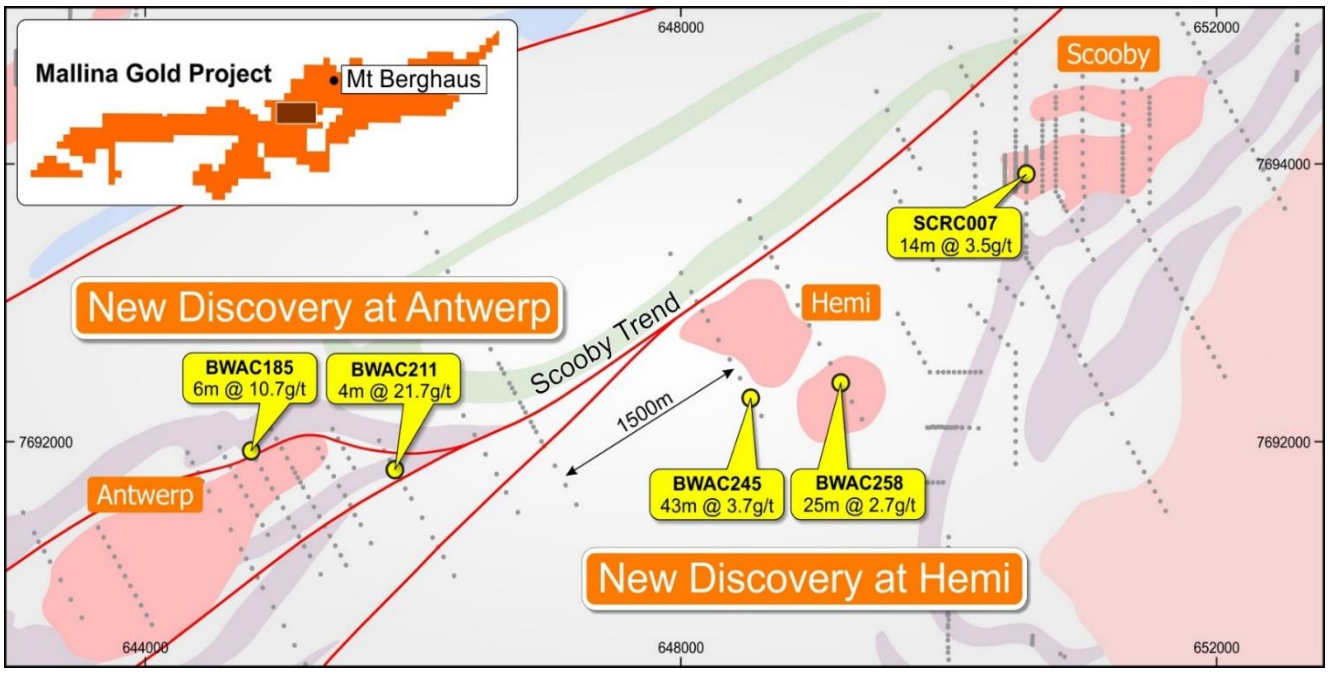
17 December 2019 **ASX Release**

New Gold Discoveries at Hemi and Antwerp

- Strong gold intercepts intersected in shallow widespaced aircore drilling at the new Hemi Prospect
  - ***43m @ 3.7g/t Au from 36m in BWAC245, including 12m @ 9.0g/t***
  - ***25m @ 2.7g/t from 32m in BWAC258, including 8m @ 4.5g/t***
- Shallow high grade intercepts also intersected in aircore drilling at Antwerp
  - ***6m @ 10.7g/t from 4m in BWAC185***
  - ***4m @ 21.7g/t from 32m in BWAC211***
- Further positive zones at Scooby in RC drilling
  - ***14m @ 3.5g/t from 37m in SRC007, including 1m @ 40g/t***
- All gold zones remain open and show potential for multiple large shear and intrusion hosted gold deposits



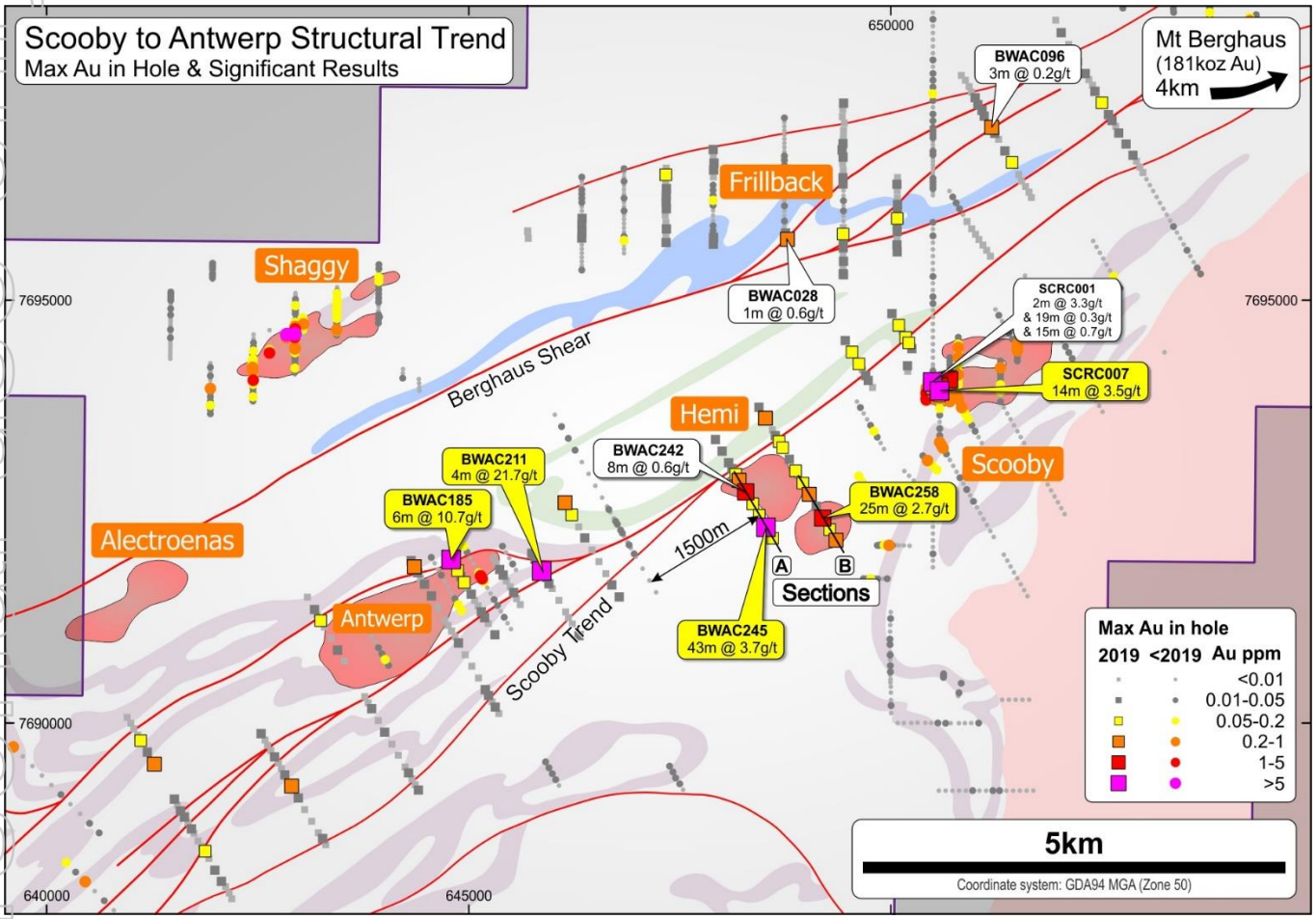
Andy Beckwith, Technical Director commented;

"Hemi and Antwerp are exciting new greenfields discoveries under a shallow blanket of sand cover and is a direct result of our regional aircore drilling program along large scale prospective corridors. These new discoveries validate the extensive geological assessment work that has been in progress for over 12 months and support our view that the Mallina Basin has the potential to host many large structurally controlled gold deposits.

De Grey holds the dominant land position along the Mallina Basin, and we have been steadfast in our belief, the Mallina Basin is a large and highly prospective gold province and yet is grossly under explored. In our view, the Mallina Basin is like the Yandal Belt and the Yamarna Belt 30 and 5 years ago respectively. Both regions have since yielded multi-million ounce gold deposits after dedicated and systematic exploration".

De Grey Mining Limited (ASX: DEG, "De Grey", "Company") is pleased to advise significant gold mineralisation has been intersected in wide spaced aircore drilling at Hemi and Antwerp and in selected RC holes at Scooby (Figures 2, 6 and 7). The aircore drilling is part of a large regional aircore drilling program (>47,500m) completed across many areas of the project, focused on new gold discoveries in prospective structural corridors. Results reported in this release only relate to the Scooby to Antwerp Structural Trend ("**SAST**").

Figure 2 Scooby to Antwerp Structural Trend – Significant results in new aircore and RC drilling



The wide spaced aircore drilling results occur on a nominal 640m x 160m spacing at the Hemi prospect and variably between 200-640m spaced lines at the Antwerp prospect with additional assay results pending for aircore drilling at Scooby (Figure 4). Sampling has been undertaken and reported on a nominal 4m composite basis with significant results presented in Table 1. Follow up 1m resampling is currently in progress. The SAST is over 15km long and is subparallel to and several kilometres south of the Mt Berghaus trend, which hosts the 181,000 ounce Mt Berghaus deposit. The SAST comprises a network of multiple shears and inter-related Toweranna style intrusions providing an excellent fluid pathway and numerous structural traps with potential to host large gold deposits. Previous explorers have shown encouraging gold mineralisation occurs in various areas within the corridor in limited drilling such as at the Scooby and Antwerp prospects (ASX Release: "*Multiple new targets increase exploration potential*" 2 July 2019).

HEMI PROSPECT

The strong gold mineralisation reported at Hemi in BWAC245 (**43m @ 3.7g/t Au from 36m, including 12 @ 9.0g/t)** is hosted in an interpreted highly sericite altered and quartz sulphide veined shear within the Mallina Basin sediments (Figure 5). Hole BWAC258 **(25m @ 2.7g/t from 32m including 8m @ 4.5g/t)** is in a quartz veined and altered mafic intrusion (Figure 6) The two new high grade gold zones are approximately 700m apart and further drilling is required to understand whether they are related or in fact represent two new independent mineralised zones (Figure 3 and 4).

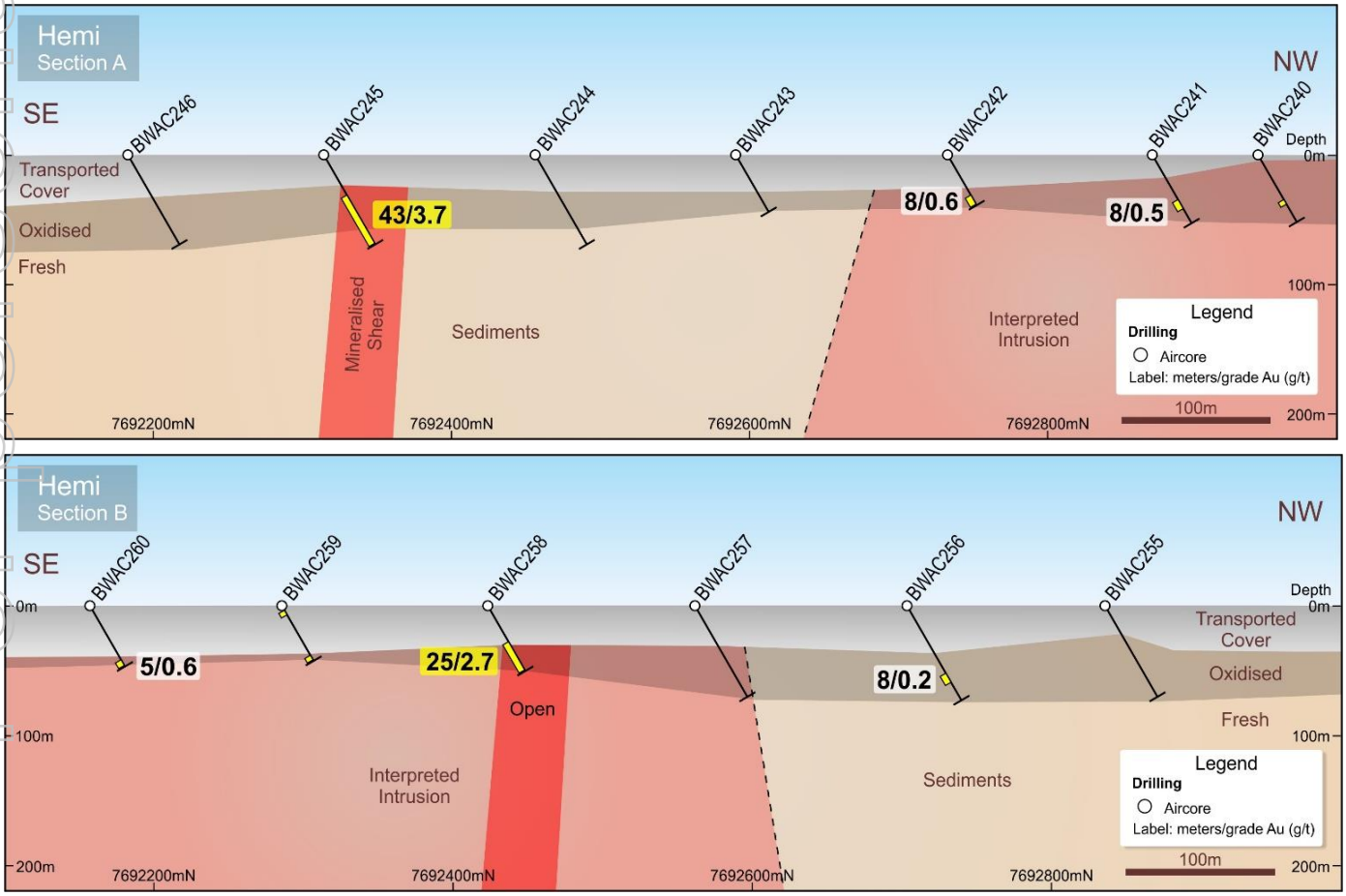
ANTWERP PROSPECT

At Antwerp, located approximately 5km SW of the Hemi prospect, the new aircore drilling program has intersected shallow high grade gold mineralisation in BWAC185 (**6m @ 10.7g/t)** and BWAC211 **(4m @ 21.7g/t)** hosted in a mafic intrusion with dimensions of approximately 2.5km x 1km bound by two interpreted thrusts (Figure 2). These encouraging high grade results complement historic shallow widespaced drilling (200-400m) results including **8m @ 0.8g/t Au inc. 4m @ 1.3g/t Au and 16m @ 0.7g/t Au (including. 8m @ 1.3g/t Au).** Further follow-up drilling is required to better assess the potential of this prospect.

SCOOBY PROSPECT

The Scooby prospect is located approximately 2km NE of the Hemi prospect. RC drilling has also intersected additional encouraging high grade gold mineralisation (**14m @ 3.5g/t from 37m including 1m @ 40.1g/t** in SRC007) associated with the intrusion. This result and other previous encouraging results including **3m @ 2.67g/t, 2m @ 5.22g/t, 6m @ 1.03g/t and 2m @ 2.77g/t** remain to be fully assessed as further aircore drilling results remain pending.

Figure 3 Hemi drill sections 640m apart (Section's A & B).

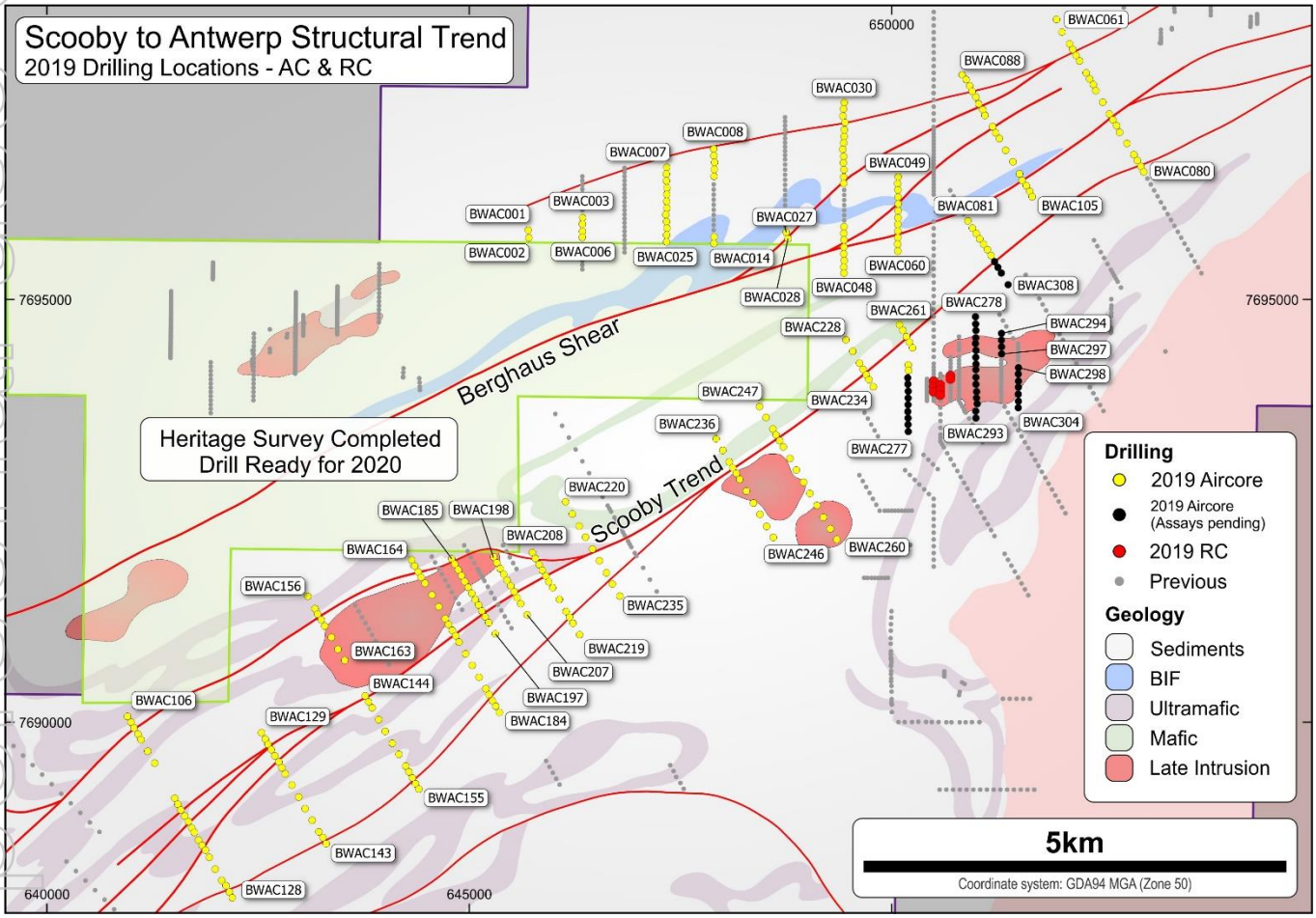


REGIONAL PROGRAM

De Grey's regional and wide spaced aircore program aims to systematically test the various large prospective corridors throughout the project for new large gold deposits. The recent drilling results at Hemi, Scooby and Antwerp justify this large scale approach. Future drilling in 2020 will continue to systematically test the Scooby to Antwerp Structural Trend and other similarly prospective corridors. Follow-up programs are being planned and will include on-going widespaced and infill aircore drilling through to detailed follow-up RC drilling programs to define potential resources.

A heritage survey has recently been completed over the parallel Berghaus Trend covering an additional ~10km of prospective structure. First pass widespaced aircore drilling is planned for the 2020 field season (Figure 4 outlined in green).

Figure 4 Scooby to Antwerp Structural Trend – Drilling locations



2019 EXPLORATION PROGRAM ACROSS THE MALLINA GOLD PROJECT

The 2019 exploration program has now been completed, with approximately 9,500m of RC and diamond core drilled at Mallina over the last three weeks. Results from Mallina, Withnell and other regional aircore drilling programs are anticipated to be reported during January 2020.

Figure 5 – HEMI - BWAC245 4m composite gold assays within the strongly quartz veined, and sericite altered sediments in drill chips.

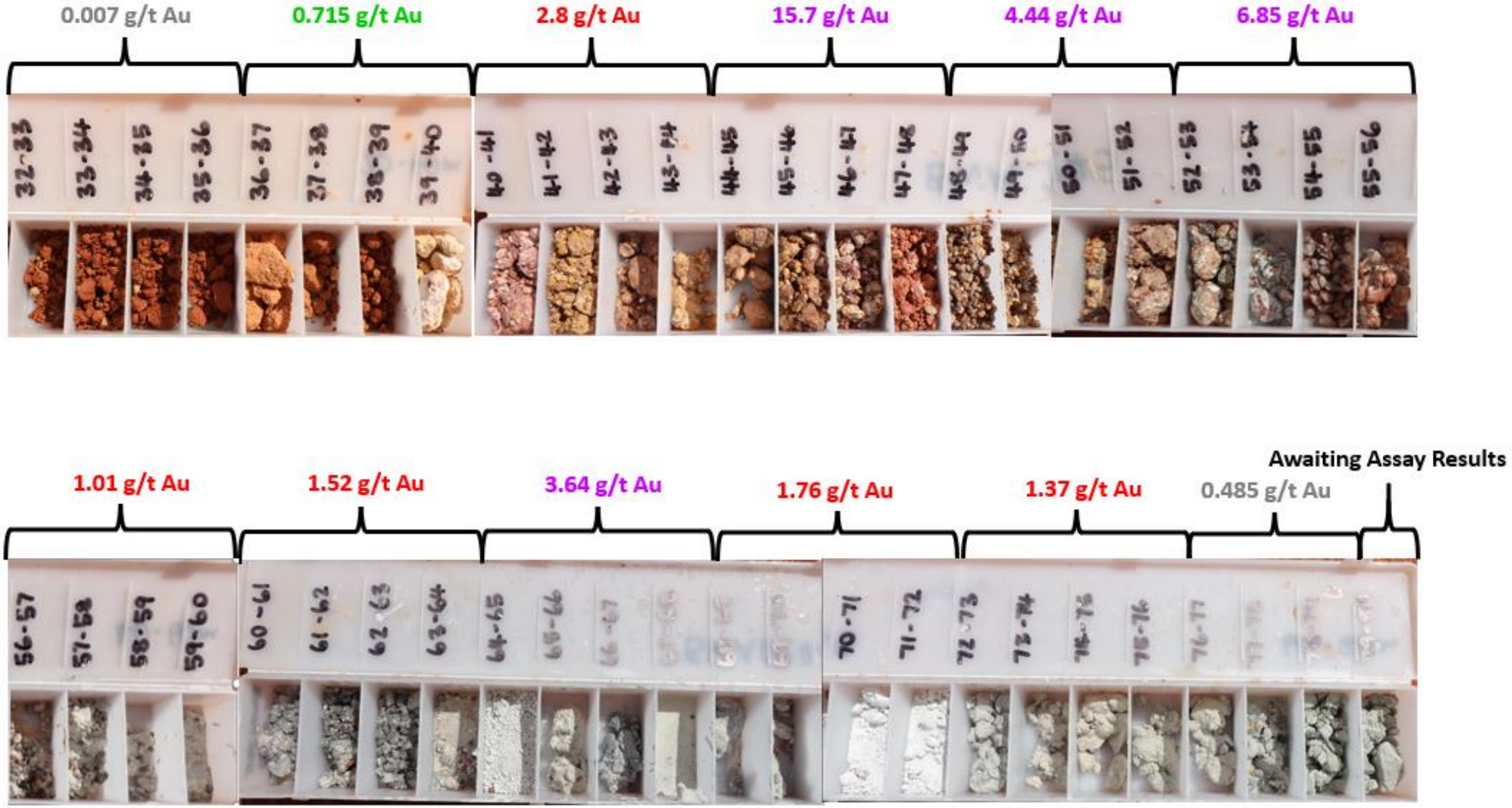
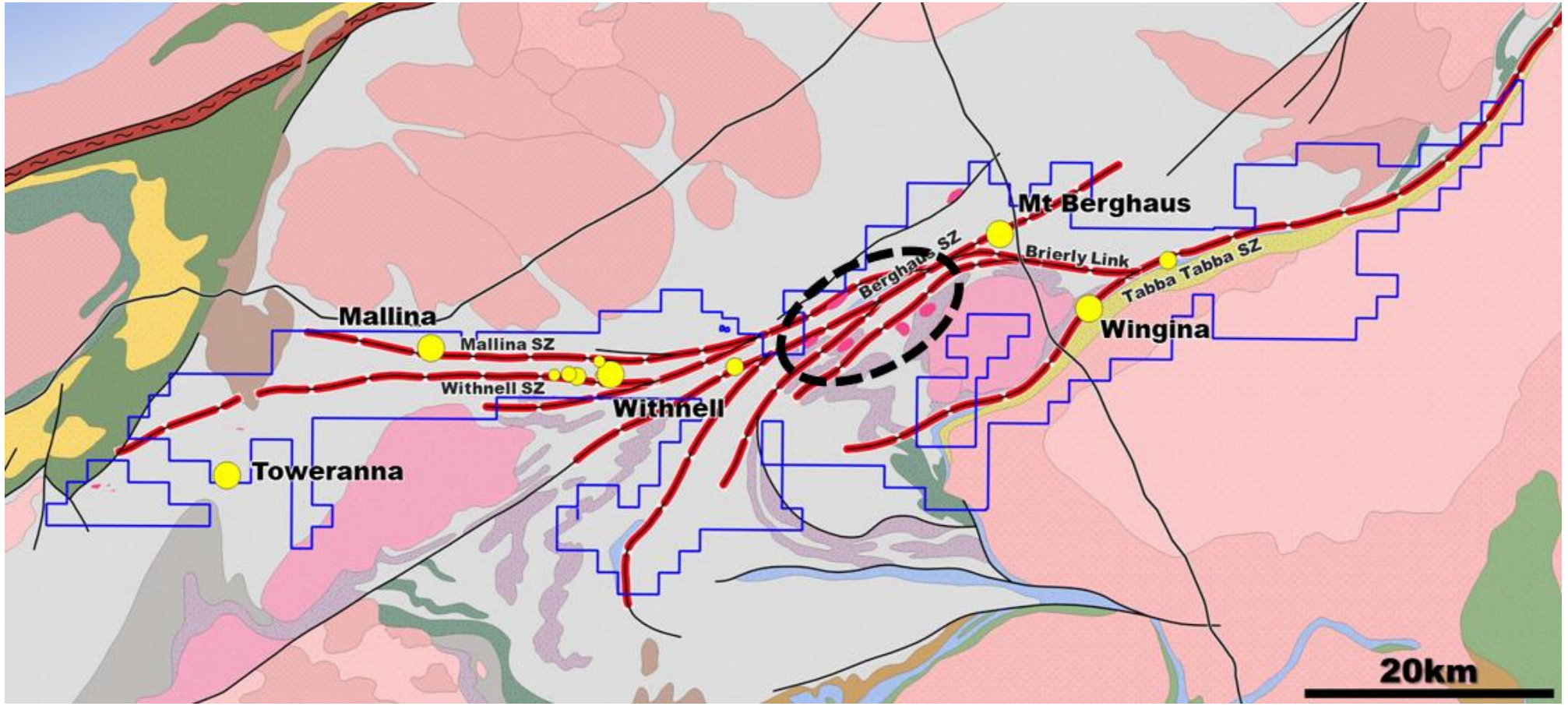


Figure 6 HEMI - BWAC258 4m composite gold assays within the strongly altered intrusion in drill chips.

Figure 7 **Mallina Gold Project showing area of drilling**



This ASX report is authorised for release by the De Grey Board.

For further information:

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Andy Beckwith (*Technical Director and Operations Manager***)**

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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 an employee of 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.

Previously Released ASX Material References

The information in this report that relates to Hemi Prospect and general Berghaus West area that has been previously released includes;

Resources:

- *Pilbara Gold Project increases gold resources by >20% to over 1.2Moz, 28 September 2017;*
- *2018 Total Gold Mineral Resource increases to 1.4Moz, 3 October 2018; and*
- *2019 Total Gold Mineral Resource – 21% increase to 1.7Moz, 16 July 2019.*

Exploration:

- *Multiple new targets increase exploration potential, 2 July 2019.*

Table 1 Significant Drill Intersections (>2 gram x m) based on 4m composite sampling

HoleID	Drill Type	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)	HoleDepth
BWAC028	AC	38.00	39.00	1.00	0.6	648775	7695718	65.0	-60	2	60
BWAC096	AC	27.00	30.00	3.00	0.2	651197	7697043	65.0	-60	330	42
BWAC100	AC	67.00	68.00	1.00	0.2	651438	7696628	65.0	-60	330	80
BWAC112	AC	16.00	20.00	4.00	0.3	641275	7689514	65.0	-60	332	46
BWAC122	AC	4.00	8.00	4.00	0.1	641877	7688484	65.0	-60	332	80
BWAC137	AC	76.00	79.00	3.00	0.3	642901	7689255	65.0	-60	332	80
BWAC165	AC	36.00	44.00	8.00	0.4	644354	7691847	65.0	-60	332	77
BWAC185	AC	4.00	10.00	6.00	10.7	644792	7691933	65.0	-60	332	10
incl	AC	4.00	9.00	5.00	12.9	644792	7691933	65.0	-60	332	10
BWAC187	AC	6.00	7.00	1.00	0.1	644869	7691801	65.0	-60	332	7
BWAC211	AC	32.00	36.00	4.00	21.7	645865	7691797	65.0	-60	332	80
BWAC211	AC	48.00	52.00	4.00	0.1	645865	7691797	65.0	-60	332	80
BWAC220	AC	40.00	44.00	4.00	0.7	646141	7692606	65.0	-60	332	77
BWAC229	AC	44.00	48.00	4.00	0.2	649541	7694387	65.0	-60	332	80
BWAC240	AC	40.00	44.00	4.00	0.1	648162	7692941	63.0	-60	332	60
BWAC241	AC	40.00	48.00	8.00	0.5	648203	7692870	63.0	-60	332	61
BWAC242	AC	36.00	44.00	8.00	0.6	648281	7692732	63.0	-60	332	45
BWAC245	AC	36.00	79.00	43.00	3.7	648522	7692313	63.0	-60	332	80
incl	AC	44.00	56.00	12.00	9.0	648522	7692313	63.0	-60	332	80
BWAC248	AC	48.00	56.00	8.00	0.2	648515	7693604	63.0	-60	332	83
BWAC256	AC	60.00	68.00	8.00	0.2	649034	7692704	63.0	-60	332	84
BWAC258	AC	32.00	57.00	25.00	2.7	649194	7692423	63.0	-60	332	58
incl	AC	44.00	52.00	8.00	4.5	649194	7692423	63.0	-60	332	58
BWAC259	AC	4.00	8.00	4.00	0.1	649276	7692287	63.0	-60	332	49
BWAC259	AC	44.00	48.00	4.00	0.1	649276	7692287	63.0	-60	332	49
BWAC260	AC	48.00	53.00	5.00	0.6	649352	7692160	63.0	-60	332	54
BWAC262	AC	40.00	45.00	5.00	0.1	650095	7694702	63.0	-60	332	46
BWAC264	AC	44.00	49.00	5.00	0.1	650177	7694559	63.0	-60	332	50
SCRC001	RC	38.00	53.00	15.00	0.7	650498	7694032	67.8	-61	0	150
incl	RC	44.00	45.00	1.00	4.2	650498	7694032	67.8	-61	0	150
SCRC001	RC	62.00	69.00	7.00	0.2	650498	7694032	67.8	-61	0	150
SCRC001	RC	77.00	96.00	19.00	0.3	650498	7694032	67.8	-61	0	150
SCRC001	RC	103.00	105.00	2.00	3.3	650498	7694032	67.8	-61	0	150
incl	RC	103.00	104.00	1.00	5.5	650498	7694032	67.8	-61	0	150
SCRC002	RC	40.00	47.00	7.00	0.3	650498	7693968	67.7	-61	2	150
SCRC004	RC	33.00	34.00	1.00	0.1	650698	7694098	67.8	-62	360	150
SCRC005	RC	32.00	35.00	3.00	0.1	650697	7694059	68.0	-61	360	150
SCRC005	RC	44.00	48.00	4.00	0.4	650697	7694059	68.0	-61	360	150
SCRC005	RC	54.00	58.00	4.00	0.3	650697	7694059	68.0	-61	360	150
SCRC005	RC	89.00	92.00	3.00	1.4	650697	7694059	68.0	-61	360	150
SCRC005	RC	144.00	147.00	3.00	0.3	650697	7694059	68.0	-61	360	150
SCRC006	RC	34.00	40.00	6.00	0.8	650579	7693988	67.7	-61	2	150
SCRC007	RC	37.00	51.00	14.00	3.5	650578	7693927	67.8	-60	2	156
incl	RC	38.00	39.00	1.00	40.1	650578	7693927	67.8	-60	2	156
SCRC007	RC	60.00	62.00	2.00	0.3	650578	7693927	67.8	-60	2	156
SCRC007	RC	82.00	83.00	1.00	0.2	650578	7693927	67.8	-60	2	156

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	• *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.*	• All drilling and sampling was undertaken in an industry standard manner. • RC holes were sampled on a 1m basis with samples collected from a cone splitter mounted on the drill rig cyclone. 1m sample ranges from a typical 2.5-3.5kg. • 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	• *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.).*	• Reverse Circulation(RC) holes were drilled with a 5 1/2-inch bit and face sampling hammer. • Aircore holes were drilled with an 83mm diameter blade bit.
Drill sample recovery	• *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.*	• RC and aircore samples were visually assessed for recovery. • Samples are considered representative with generally good recovery. • No sample bias is observed.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• The entire hole has been geologically logged by Company geologists. • RC sample results are appropriate for use in a resource estimation.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *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.*	• RC sampling was carried out by a cone splitter on the rig cyclone and drill cuttings were sampled on a 1m and 4m composite basis. • Aircore samples were collected by spear from 1m sample piles and composited over 4m intervals. A final 1m bottom of hole assay remains pending. • 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. • RC samples are appropriate for use in a resource estimate. • Aircore samples are generally of good quality and appropriate for delineation of geochemical trends but are not generally used in resource estimates. • Collection of 1m resplits of composite aircore samples is underway.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.*	• The samples were submitted to a commercial independent laboratory in Perth, Australia. • For RC samples Au was analysed by a 50g charge Fire assay fusion technique with an AAS finish. • 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	• *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.*	• 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	• *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.*	• RC drill hole collar locations are located by DGPS to an accuracy of +/-10cm. • 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	• *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.*	• RC drilling is on a nominal 80m x 50m grid spacing. Aircore drill spacing varies from 1280m to 320m spaced lines, with holes spaced at 80m or 160m along lines. • All holes have been geologically logged and provide a strong basis for geological control and continuity of mineralisation. • Data spacing and distribution of RC drilling is sufficient to provide support for the results to be used in a resource estimate. • 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	• *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*	• The drilling is approximately perpendicular to the strike of mineralisation where known 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

Criteria	JORC Code explanation	Commentary
	and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	downhole widths. This will be allowed for in resource estimates when geological interpretations are completed.
Sample security	• *The measures taken to ensure sample security.*	• Samples were collected by company personnel and delivered direct to the laboratory via a transport contractor.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• 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	• *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.*	• Drilling occurs on tenements E47/891, E45/3390 and E45/3392 held by Domain Mining Pty Ltd and Last Crusade Pty Ltd, which are 100% subsidiary of De Grey Mining Ltd. • The tenements are located approximately 80km south of Port Hedland.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The tenements have had some previous surface geochemical sampling and wide spaced aircore and RAB drilling by Resolute and De Grey Mining. Limited previous RC drilling was carried out at the Scooby Prospect. Airborne aeromagnetics/radiometrics has been flown previously.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The mineralisation targeted is hydrothermally emplaced gold mineralisation within a shear zone. Host rocks comprise Mallina Basin metasediments and intrusive rocks and is similar in style to many other Western Australian gold deposits.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *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.*	• Drill hole location and directional information provide in the report.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*	• Results are reported to a minimum cutoff grade of 0.1g/t gold with an internal dilution of 4m maximum. • Higher grade intervals included in the above intercepts are reported at a 4g/t Au lower cut. • Intercepts are length weighted averaged. • No maximum cuts have been made.

Criteria	JORC Code explanation	Commentary
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• 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	• *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.*	• Plans and sections are provided in the report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All significant results are provided in this report. • The report is considered balanced and provided in context.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Drilling is currently very wide spaced and further details will be reported in future releases when data is available.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Follow up aircore drilling will be undertaken to test for strike extensions to mineralisation. • Programs of follow up RC and diamond drilling aimed at extending resources at depth and laterally will be planned based on aircore results.