

20 January 2022

Nine (9) New High Priority Au-Cu Targets Across 5km Strike

HIGHLIGHTS

- **Sub-Audio Magnetism (SAM) survey identifies eighteen (18) priority targets with nine (9) new High-Priority Targets at the Brilliant-Kingfisher blocks with a strike length of 5km.**
- **SAM survey also highlighted numerous targets not previously known, with the Copper targets providing additional upside for the Gold Duke Project.**
- **Top two targets are coincident with historic workings, geochemical anomalism, and extensions to known deposits**
- **The historic North Brilliant Mine located on the southern limit of the survey area produced 5,265t @ 17.4g/t Au for 2,955oz**
- **The Kingfisher SAM survey block defined the concealed Kingfisher North Au-Cu intrusive target and alteration halo that will be drill tested in Q2, 2022 as part of a WA Government EIS Co-funded drilling grant of \$118,500 (See ASX announcement 28 October 2021)**
- **Previous interpretation of the SAM survey over the Wren Block that covers 3km strike length of the Joyners Find Shear Zone (see ASX release 11 November 2021) identified 10 new gold targets. Exploration planning for these targets is well advanced and is expected to commence early February.**
- **Field mapping and surface geochemical programs to assist in evaluating targets well advanced**
- **Resource upgrade to the current combined JORC-2012 Mineral Resource estimate of 4,570,000 tonnes at 2.0 g/t Au for 293,000 oz Au (refer Table 2) currently being prepared.**

Western Gold Resources (ASX: WGR) (“**WGR**” or “the **Company**”) is pleased to announce that results of the Sub-Audio Magnetism (SAM) survey completed over the Brilliant-Kingfisher blocks at the Gold Duke Project (Figure 1; Table 1) have provided valuable insights into the geological structures and potential controls of mineralisation within the Brilliant shear zone (BSZ). The Gold Duke Project, located in the northern goldfields, 35km to the west of Wiluna, contains a combined Mineral Resource estimate JORC-2012 Mineral Resource estimate of 4,570,000 tonnes at 2.0 g/t Au for 293,000 oz Au (Table 2).

The SAM survey at the Brilliant-Kingfisher block is two of three blocks surveyed at the Gold Duke Project (see ASX release 2nd August 2021) and covers the northern section of the Brilliant Shear Zone (BSZ), host to the Brilliant and Bottom camp Mineral Resources and the Kingfisher prospect (Figure 1, Table 2). Previous interpretation of the SAM survey over the Wren Block that covers 3km strike length of the Joyners Find Shear Zone (see ASX release 11th November 2021) identified 10 new gold targets. Planning for Exploration based on these targets is well advanced.

The BSZ is interpreted to extend over a strike length of 16 km and is 0.5 km wide containing sheared mafic and ultramafic units with occasional intrusions of differentiated dolerite sills and quartz-feldspar porphyry dykes. Mineralisation within ultramafic host rocks is coincident with less frequent brittle-ductile mineralisation that occurs as quartz veins and stockwork within dolerite, gabbro, and felsic porphyry intrusions. The historic North Brilliant Mine located on the southern limit of the survey area produced 5,265t @ 17.4 g/t for 2,955 oz.

The completed SAM survey has identified nine high-priority targets (Figures 1) producing three datasets; TMI (magnetics), MMC (magneto-metric conductivity) and TFEM (Total Field Electromagnetics). TMI data is measured passively as a function of the Earth's magnetic field distorted by magnetic minerals in the rocks, MMC data is measured while current is flowing through the ground, and TFEM are measured as that current is switched off and there is a decay of potential.

WGR Managing Director Warren Thorne commented:

“The use of modern geophysical techniques such as SAM has provided WGR an opportunity to determine the sub-surface geology and potential controls of mineralisation along the Brilliant Shear Zone. The beauty of using the SAM geophysical technique is that it models the potential pathway of gold-bearing fluids and potential traps for gold deposition.

The SAM survey results have highlighted the potential for numerous styles of mineralisation related to the Brilliant Shear Zone, including both shear-hosted and intrusion-related. Analogues to the Brilliant North and Top Knot deposits are observed elsewhere in the survey area and provide significant exploration up-side to the project. The results from the survey provide the company with numerous targets not observed from previous geophysical and geological work, allowing our exploration team to conduct targeted exploration programs to maximise exploration success”

NEXT STEPS

The SAM survey has successfully delineated structural trends which correlate with previously identified mineralisation/anomalism and provide follow-up targets for soil sampling and follow-up shallow drill testing.

At present, WGR plans to test four targets in Q2, three targets north of the Brilliant mine (targets 1, 2 and 4) and one target at the Kingfisher North area (Target 3). The concealed Kingfisher North Au-Cu target is part of an WA Government EIS Co-funded drilling grant of \$118,500 (See ASX announcement 28th October 2021).

TARGETS IDENTIFIED FROM SAM SURVEY

Nine (9) high-priority target areas and 9 lower priority targets have been identified and ranked from the SAM results, geochemical datasets, and geological understanding of the area. These are shown in Figure 2 and summarised in Table 1.

Target 1 - Northern extension of the Brilliant deposit with MMC low adjacent to Brilliant Shear Zone known to contain elevated levels of gold in soil geochemistry and drilling. Low MMC likely to be related to quartz veining.

Target 2 - Broad MMC low adjacent to shear zone with cross cutting structure. Known to contain elevated levels of gold as evidenced by Bottom Camp deposit. Northern portion of target within creek zone not previously drilled.

Target 3 (a, b, and c) – Kingfisher North Interpreted intrusive and associated alteration halo that is concealed below Proterozoic cover. Minor flexure of the BSZ along western contact of the intrusive.

Target 4 - Broad MMC low adjacent to shear zone along strike from Brilliant and North Brilliant with cross cutting structure. Contains elevated As, Cr and Au in soil geochemistry and several small prospector pits present in this area.

Target 5 - MMC low on NS structure with known elevated levels of gold as evidenced by historic shafts at the Kingfisher deposit. Vergence of cross cutting structure may create structural trap for gold

Target 6, 7 and 8 - Broad MMC low flanked by prominent structure to the west and metasediment boundary to the east. Similar MMC signature as adjacent Brilliant deposit. Associated EM anomalies may indicate the presence of sulphides associated with gold mineralisation

Target 9 - MMC low bounded by two interpreted metasedimentary units with cross cutting structure. Minor thinning of stratigraphy commonly associated with gold mineralisation within project area.

Nine Priority 2 Targets have been identified, Targets 10-18. The targets include areas of favourable structural setting which coincides with MMC lows or are adjacent to metasedimentary unit or to major structure, which could act as potential fluid pathway. Many of the targets follow a major N-trending structure that parallels the main BSZ and are located on flexures of the structure.

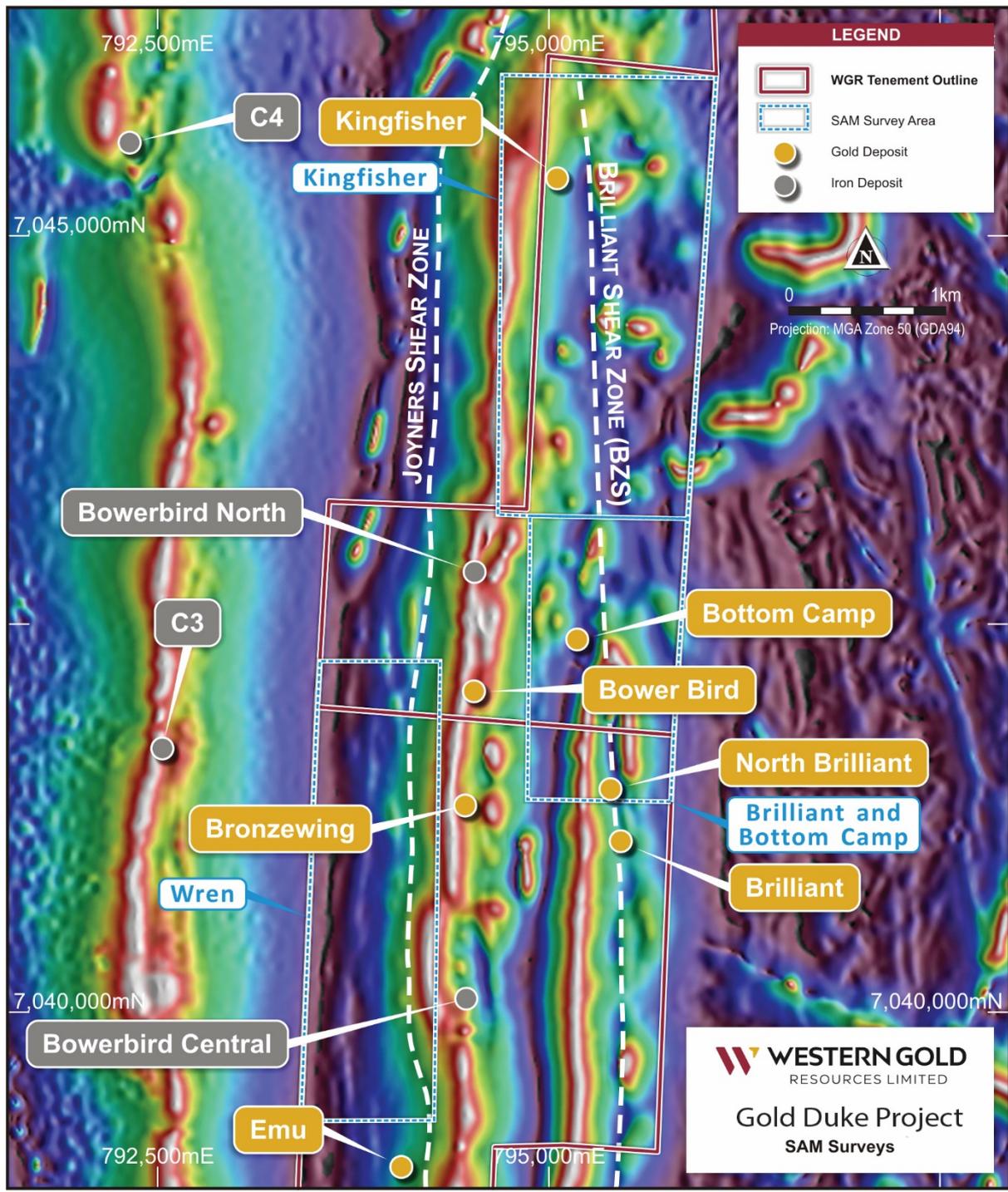


Figure 1. SAM Survey Blocks over the Brilliant and Joyners Find Shear zones, deposit locations (on TMI)

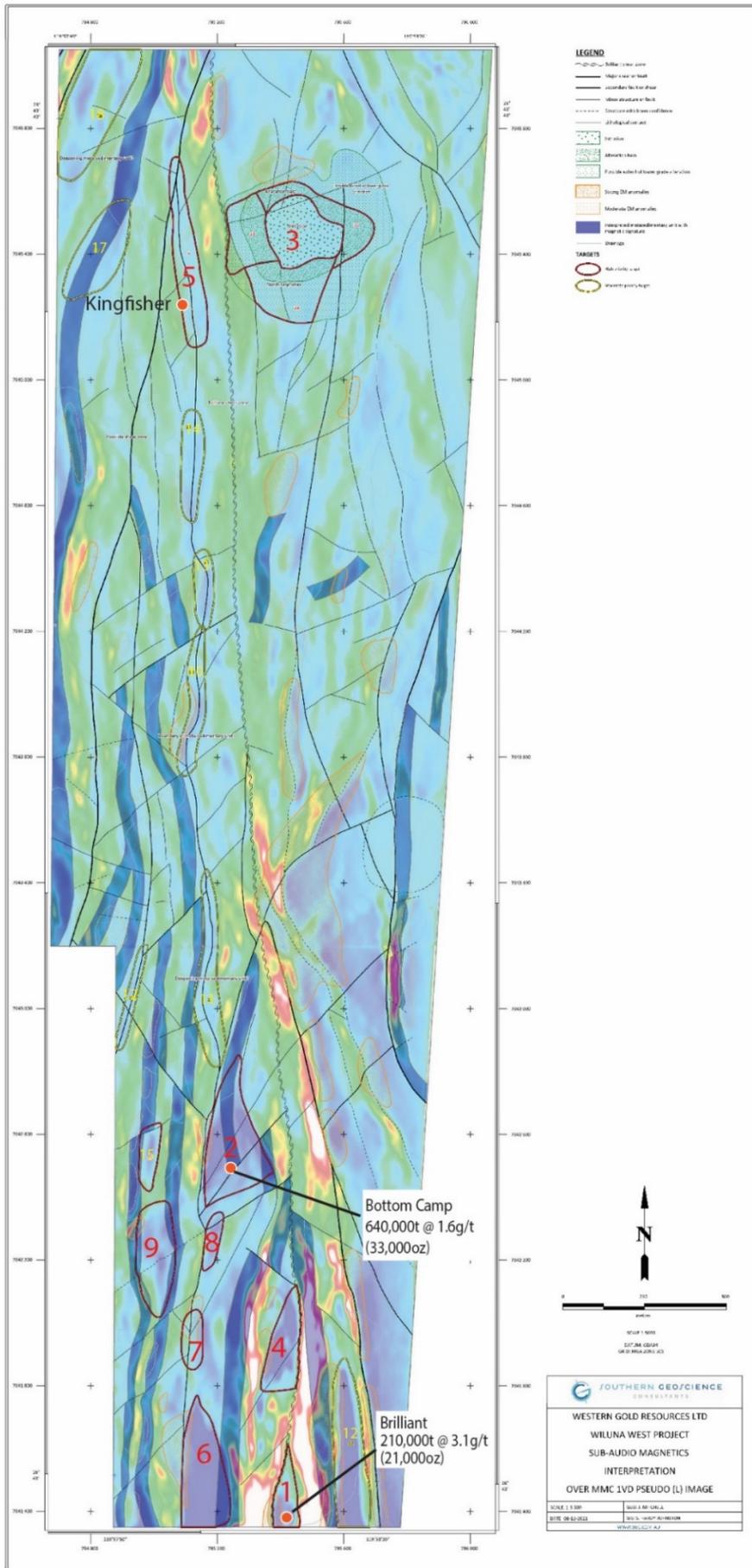


Figure 2. SAM Interpretation over MMC 1VD Pseudo (L) Image

Table 1 Exploration Targets at Brilliant - Kingfisher Block(s) based on the SAM data

Target ID	Easting (MGA50)	Northing (MGA50)	Priority	Description
1	795419	7041476	1	MMC low adjacent to Brilliant Shear Zone known to contain elevated levels of gold as evidenced by North Brilliant deposit.
2	795267	7042610	1	Broad MMC low adjacent to shear zone with cross cutting structure. Known to contain elevated levels of gold as evidenced by Bottom Camp deposit. Northern portion of target within creek zone not previously drilled.
3a	795432	7045286	1	Alteration halo around intrusion with coincident magnetic anomaly interpreted to be contact metamorphism. North Kingfisher.
3b	795313	7045466	1	Alteration halo around intrusion adjacent to Brilliant Shear Zone.
3c	795641	7045495	1	Alteration halo around intrusion with cross cutting structure.
4	795401	7041951	1	Broad MMC low adjacent to shear zone along strike from Brilliant and North Brilliant with cross cutting structure.
5	795109	7045406	1	MMC low on NS structure with known elevated levels of gold as evidenced by Kingfisher deposit. Vergence of cross cutting structure.
6	795164	7041560	1	Broad MMC low flanked by prominent structure to the west and metasediment boundary to the east.
7	795121	7041947	1	MMC low along strike of target 6 with cross cutting structure.
8	795186	7042260	1	MMC low along strike of target 6 with cross cutting structure.
9	795005	7042203	1	MMC low bounded by two interpreted metasedimentary units with cross cutting structure.
10	795118	7043978	2	MMC low on flexure zone with cross cutting structure on interpreted NS trending structure, possible shear.
11	795176	7043129	2	MMC low on flexure zone with cross cutting structure on interpreted NS trending structure, possible shear. Along strike of target 10.
12	795624	7041619	2	MMC low on bounded by edge of metasedimentary unit to the west. Similar appearance to target 6 but on the east of the Brilliant Shear Zone.
13	795157	7044334	2	MMC low on flexure zone with cross cutting structure on interpreted NS trending structure, possible shear. Along strike of target 10.
14	795122	7044727	2	MMC low on straight section of interpreted NS structure, possible shear.
15	794930	7043036	2	MMC low along strike of target 9 and adjacent to metasediment boundary to the east.
16	794819	7045414	2	MMC low adjacent to interpreted metasedimentary unit with cross cutting structure.
17	794829	7045843	2	Broad MMC low with metasedimentary unit.
18	794987	7042528	2	MMC low adjacent to major structure and metasedimentary unit with cross cutting structure.

This ASX announcement was authorised for release by the Board.

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Competent Person's Statement

The information in this report which relates to Exploration Results is based on information compiled by Dr Warren Thorne, is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and a full-time employee of the company. Dr Thorne who is an option-holder, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Dr Thorne consents to inclusion in the report of the matters based on this information in the form and context in which it appears.

Where the Company refers to Exploration Results and to the Mineral Resource estimate included in its Prospectus dated 18 May 2021 and in previous announcements, it confirms that it is not aware of any new information or data that materially affects the information included in those announcements and all information in relation to the Exploration Results and material assumptions and technical parameters underpinning the Mineral Resource estimate within those announcements continues to apply and has not materially changed.

Table 2
Gold Duke Project - JORC 2012 Mineral Resource Estimate

JORC Status	Year	Prospect	Classification	Tonnes	Grade (g/t Au)	Ounces	
JORC 2012 at 0.5 g/t cut-off	2019	Golden Monarch	Measured	30,000	3.0	3,000	
			Indicated	380,000	2.1	26,000	
			Inferred	390,000	2.1	26,000	
			Subtotal	800,000	2.2	55,000	
	Eagle	Indicated	110,000	2.8	10,000		
		Inferred	680,000	1.6	35,000		
		Subtotal	790,000	1.8	45,000		
	Emu	Inferred	600,000	2.2	42,000		
	Joyners Find	Inferred	90,000	2.6	7,000		
	2021	Bottom Camp	Inferred	640,000	1.6	33,000	
		Bowerbird	Inferred	230,000	2.4	17,000	
		Brilliant	Inferred	210,000	3.1	21,000	
		Bronzewing	Inferred	110,000	2.7	9,000	
		Comedy King	Inferred	260,000	1.5	12,000	
		Gold Hawk	Inferred	150,000	1.5	7,000	
		Gold King	Inferred	580,000	1.9	36,000	
		Wren	Inferred	110,000	2.4	8,000	
	Total JORC 2012			Measured	30,000	3.0	3,000
				Indicated	490,000	2.3	36,000
				Inferred	4,050,000	2.0	254,000
			Combined	4,570,000	2.0	293,000	

2012 Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> A sub-audio magnetics (SAM) survey was completed at the Gold Duke project by GP Geophysics Australia Pty Ltd. The survey consisted of 308-line kilometres completed on 25m line spacings
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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"> No drilling was completed
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"> No drilling was completed
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"> No drilling was completed and therefore no logging undertaken
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"> No drilling was completed

Criteria	JORC Code explanation	Commentary
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> The geophysical equipment used: <ul style="list-style-type: none"> Transmitter: GAP Geopack High Power GPTX-30 Base station: A magnetometer capable of recording 0.1nT Receiver: GAP TM-7 Magnetometer sampling at 2400Hz QAQC of survey results is completed following transmission of data to GAP Geophysics
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"> Raw geophysical data was captured electronically in the field and sent to GAP Geophysics daily for internal validation. The modelled data was completed by GAP geophysics and interpreted by Southern Geoscience Consultants. All quality control was completed by GAP Geophysics and reviewed by Core Geophysics.
Location of datapoints	<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"> All spatial data was collected in MGA GDA94 Zone 50 via a GPS receiver accurate to 5m.
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"> Lines were completed on 25m line spacings
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 considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> A nominal line direction of 90 degrees was completed (perpendicular to orientation of orientation of lithology and structure)
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> No samples taken
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 or reviews of the sampling technique were completed

Section 2 Reporting of Exploration Results

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"> The Gold Duke project is located in Western Australia approximately 45km south east of the township of Wiluna. The tenements comprising the project are listed below.

Criteria

JORC Code explanation

Commentary

Tenement	Holder	Expires	Area (Ha)
M53/971-I	GWR	24/01/2023	9.71
M53/972-I	GWR	24/01/2023	9.71
M53/1016-I	GWR	29/01/2027	617.45
M53/1017-I	GWR	29/01/2027	808.7
M53/1018-I	GWR	29/01/2027	593.65
M53/1087-I	GWR	22/09/2031	6,343.37
M53/1096-I	GWR	12/04/2037	195.1

- All tenements are 100% owned by the GWR Group Limited. The survey was completed on M53/1017 and M53/1018.
- All tenements are covered by the granted Wiluna Native Title Claim (WCD2013/004) and are subject to a Mining Agreement with the Native Title Holders.
- M53/1016, M53/1017 and M53/1018 are subject to a Royalty Agreement of \$10 per troy ounce to 50,000 ounces of gold produced and \$5 per troy ounce thereafter
- All the tenements are in good standing

Exploration done • *Acknowledgment and appraisal of exploration by other parties.*

- The Gold Duke has been explored for gold since approximately 1920 and evidence of historical mine workings and prospecting pits are found in more than 20 locations over 15 km confined to the better exposed portions of the Joyners Find Greenstone Belt. Gold exploration has been carried out within the project area since 1980 with a peak between 1984 and 1990. In total, approximately 23,000 metres of reverse circulation and 15,000 metres of rotary air blast drilling was completed. Detailed and regional geological mapping was also undertaken along with aeromagnetic and aerial photography surveys
- The ground has been held by GWR Group limited since 2004 where the primary focus has been iron ore exploration, but more recently gold exploration

Geology • *Deposit type, geological setting and style of mineralisation.*

- Gold mineralisation is related to two regional shear zones within the Archaean Joyners Find greenstone belt; the Joyners Find and Brilliant Shear Zones. Mineralisation within the Joyners Find Shear Zone is dominated by BIF hosted mineralisation, whilst mineralisation within the Brilliant Shear is hosted by quartz reefs and quartz stockworks.
- The gold mineralisation and anomalies in this ASX release are understood to be related to the Joyners Find Shear zone

Criteria	JORC Code explanation	Commentary										
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"> No drilling was completed; however, a geophysical survey was undertaken that is non-invasive and recorded at surface. The corners of the grid are listed below <table border="1"> <thead> <tr> <th>Easting_MGA</th> <th>Northing_MGA</th> </tr> </thead> <tbody> <tr> <td>794871</td> <td>7041350</td> </tr> <tr> <td>795780</td> <td>7041350</td> </tr> <tr> <td>794700</td> <td>7046050</td> </tr> <tr> <td>796070</td> <td>7046050</td> </tr> </tbody> </table>	Easting_MGA	Northing_MGA	794871	7041350	795780	7041350	794700	7046050	796070	7046050
Easting_MGA	Northing_MGA											
794871	7041350											
795780	7041350											
794700	7046050											
796070	7046050											
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 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> No drilling was completed 										
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> 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 (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> No drilling was completed 										
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No drilling was completed Geophysical survey location and corner points are shown in Figure 1 										
Balance reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All survey results are shown in the body of the Announcement 										
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Refer to previous releases made by WGR 										
Further work	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drilling is proposed to target areas delineated by the survey 										