

9 November 2021

SAM Survey Identifies 10 New Gold Targets across 3km Strike Length

HIGHLIGHTS

- **Sub-Audio Magnetics (SAM) survey identifies 10 Targets at the Wren block with a strike length of 3km**
- **Top four targets are coincident with historic workings, geochemical anomalism, and extensions to known deposits**
- **SAM survey also highlighted numerous targets not previously known.**
- **Approvals well advanced over priority targets**
- **Field mapping and surface geochemical programs to assist in evaluating targets underway**
- **WGR awaits the SAM survey results and interpretation over the Brilliant-Topknot and Kingfisher Block.**
- **The Kingfisher SAM survey block will be used to further define the concealed Kingfisher North Au-Cu target 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 28th October 2021)**

Western Gold Resources (ASX: WGR) (“**WGR**” or “the **Company**”) is pleased to announce that results of the Sub-Audio Magnetics (SAM) survey completed over the Wren Block at the Gold Duke Project (Figure 1) have provided valuable insights into the geological structures and potential controls of mineralisation within the Joyner's Find shear zone

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 survey at the Wren block is one of three blocks surveyed at the Gold Duke Project (see ASX release 2nd August 2021) and covers the northern section of the Joyner's Find Shear zone, host to most of the significant gold resources on the project.

The completed SAM survey has identified ten (10) targets (Figures 1, 2) 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

Joyner's 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 show that flexures in shear zones, particularly where they intersect NE-trending fault zones and areas of stratigraphic thinning are highly prospective. These high priority targets are co-incident with historic workings and geochemical anomalies. Similar analogues with no previous exploration 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"

TARGETS IDENTIFIED FROM SAM SURVEY

Ten (10) target areas have been identified and ranked from the SAM results and interpretation. These are shown in Figures 1 and 2 and summarised in Table 1.

Four High Priority Targets have been identified, Targets 1-4. Target 1 is defined by a 3km-long shear zone (defined by a MMC low) within a package of the metasediments to the east of the shear and ultramafics to the west. Within Target 1, four specific targets have been identified, Targets 1a-1d, described below.

- Target 1a - Section of the metasedimentary unit adjacent to a major shear zone with the anomalous Au-As geochemistry defined from rock chip samples (see ASX release 22nd September 2021) and host to the Wren deposit JORC 2012 Inferred Resource estimate of 110,000 tonnes at 2.4 g/t Au for 8,000 ounces. A subtle bend of the unit as well as apparent narrowing of the chert horizon provides a favourable structural setting.
- Target 1b - Narrowing of the metasedimentary unit adjacent to a major shear zone with high values of gold from rock chip samples and host to the Quail prospect, that contains historic workings. Broad EM anomaly co-incident with a possible NE trending fault.
- Target 1c - Section of the metasedimentary unit adjacent to a major shear zone. A subtle bend of the unit provides a favourable structural setting as well as apparent widening of the unit.
- Target 1d - Section of the metasedimentary unit adjacent to a major shear zone at the intersection of major structure/drainage feature and a bend in the unit providing favourable structural setting.

Target 2 is a N-S structure coincident with Top Knot historic mining area and adjacent to a major shear or fault with subtle bending. NE trending faults provide likely secondary controls to gold mineralisation. Target 3 is a N-S major structure coincident with a low in MMC and a 1000m northern extension of the Emu prospect trend that contains a JORC 2012 inferred resource estimate of 600,000 tonnes at 2.2 g/t Au for 42,000 ounces. Target 4 is N-S structure coincident with a strong low in MMC interpreted to be the stratigraphic horizon.

Four Moderate Priority Targets have been identified, Targets 5-8. The targets are related to flexures in the major shear zones, MMC lows and thinning of stratigraphy.

Two Priority 3 Targets have been identified and relate to N-S trending MMC lows adjacent the intersection of a major shear and NE trending faults

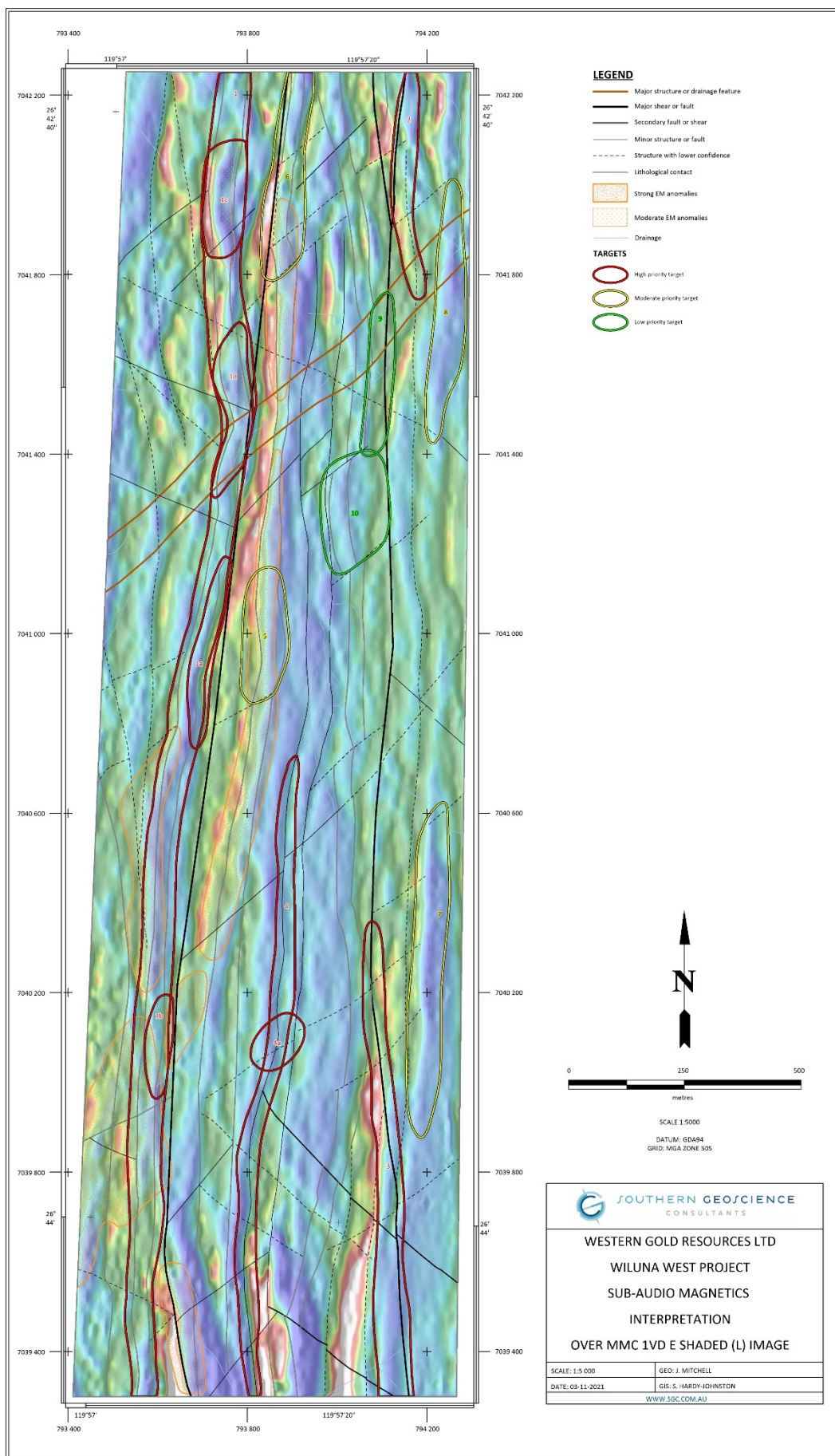


Figure 1. SAM Interpretation over MMC 1VD E Shaded (L) Image

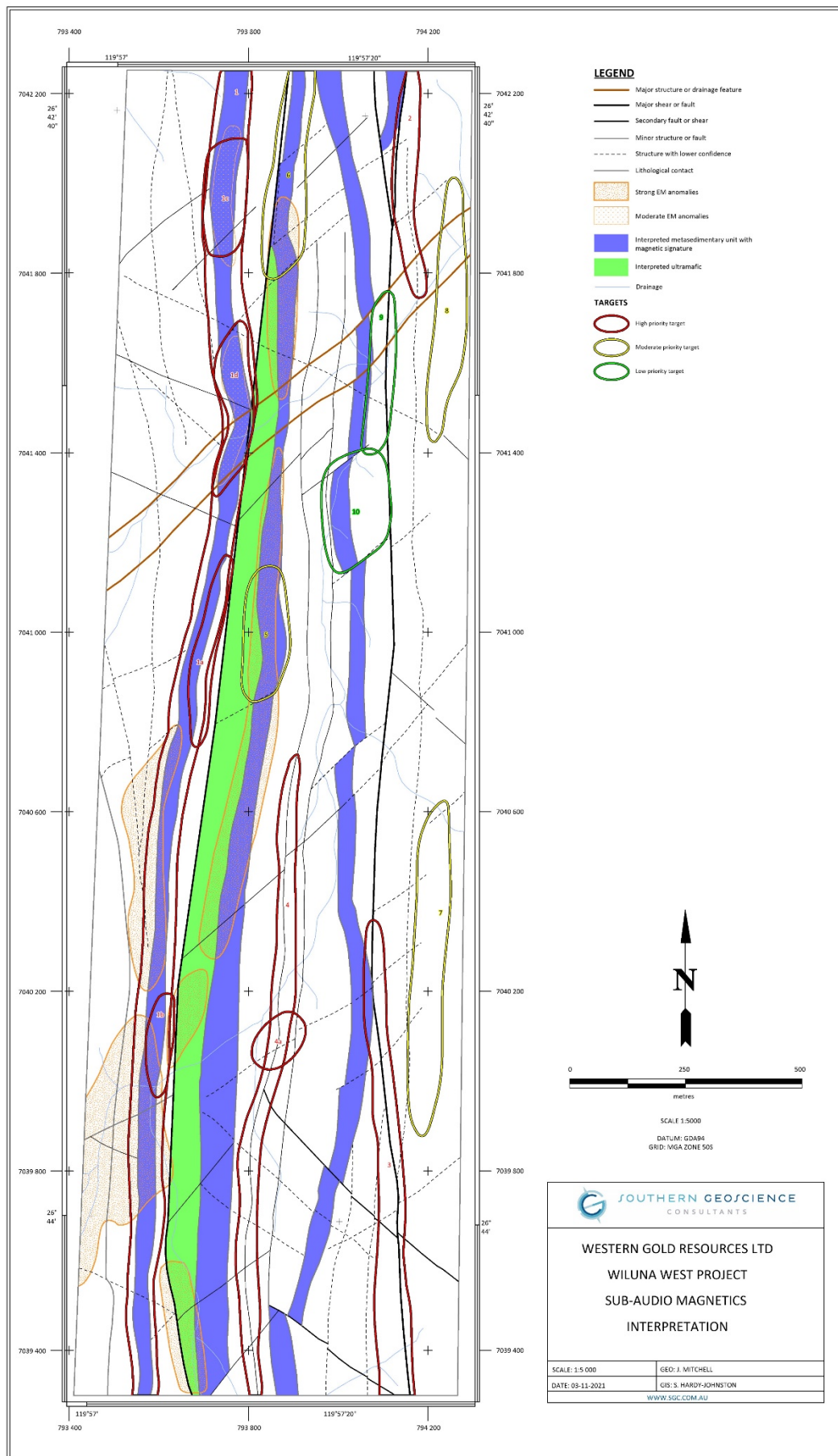


Figure 2. SAM survey displaying structural interpretation, interpreted lithologies, EM anomalies and targets

Table 1 Exploration Targets at Wren Block based on the SAM data

Target ID	Priority	Description
1	1	MMC low interpreted to be stratigraphic horizon bounding metasedimentary unit adjacent to major shear zone known to contain elevated levels of gold.
1a	1	Section of the gold bearing metasedimentary unit adjacent to major shear zone with the highest values of gold from rock chip samples. A subtle bend of the unit provides a
1b	1	Narrowing of metasedimentary unit adjacent to major shear zone with high values of gold from rock chip samples and apparent narrowing of the unit. Broad EM anomaly con-
1c	1	Section of the gold bearing metasedimentary unit adjacent to major shear zone with anomalous gold values from rock chip samples. A subtle bend of the unit provides a
1d	1	intersection of major structure/drainage feature and a bend in the unit providing favourable structural setting.
2	1	or fault with subtle bending. NE trending fault likely are secondary controls to gold mineralisation
3	1	Emu prospect
4	1	NS structure coincident with strong low in MMC interpreted to be stratigraphic horizon.
4a	1	providing favourable structural setting.
5	2	apparent bend. Possible repetition of Target 1?
6	2	Metasedimentary adjacent to major shear zone. Subtle bending provides favourable structure as well as apparent narrowing. Possible repetition of Target 1?
7	2	NS major structure coincident with low in MMC and interpreted to be adjacent to BIF unit.
8	2	NS major structure coincident with broad low in MMC.
9	3	NS MMC low adjacent to interpreted metasedimentary unit and major structure.
10	3	Fault displacement of metasedimentary unit adjacent to major structure. Possible shadow zone coincident with MMC low on eastern margin on metasedimentary unit.

NEXT STEPS

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

The survey has also highlighted numerous targets not previously known. All targets will be re-assessed and reviewed as new geological and drilling data becomes available.

WGR also awaits the SAM survey results and interpretation over the Brilliant-Topknot and Kingfisher Block that will provide additional geological data along the Brilliant Shear Zone. The Kingfisher SAM survey block will be used to further define the concealed Kingfisher North Au-Cu target that will be drill tested in Q2, 2022 as part of an WA Government EIS Co-funded drilling grant of \$118,500 (See ASX announcement 28th October 2021)

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 the Mineral Resource estimate recently updated and released on 12 April 2021 it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the resource estimate within that announcement continue to apply and have 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