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RAS MRE UPGRADE - ONE MILLION OUNCES ADDED AT HIGHER GOLD GRADES

UPDATED MINERAL RESOURCE ESTIMATE (MRE)

- **One-Million Ounces of gold have been added at RAS with a 30% grade increase from drilling over the six-months since the July 2022 RAS MRE Upgrade.**
- **RAS 2023 MRE upgrade totals 2.66Moz @ 2.5g/t Au up from 1.68Moz @ 1.9g/t Au including a maiden Indicated Resource of 0.28Moz @ 4.3g/t Au (10% of total MRE at 0.5g/t lower cut-off / top cut).**
- **Global Resources at all 4 RSSZ Deposits are 2.91Moz @ 2.3g/t Au (0.5g/t lower cut-off / top cut).**

Mineral Resources by lower cutoff (top-cut) - Feb'23					
Deposit	category	cutoff (Au g/t)	tonnes (Mt)	Au grade (g/t)	ounces (koz)
RAS	Indicated	1.5	1.6	5.0	267
		0.5	2.0	4.3	279
		0.25	2.0	4.3	279
	Inferred	1.5	16.8	3.6	1,967
		0.5	31.5	2.4	2,383
		0.25	33.4	2.2	2,408
RAS TOTAL	Indicated & Inferred	1.5	18.4	3.8	2,234
		0.5	33.5	2.5	2,662
		0.25	35.4	2.4	2,687
CIT	Inferred	1.5	0.5	2.4	36
		0.5	1.2	1.5	59
		0.25	3.2	0.8	81
SHR	Inferred	1.5	0.8	2.0	52
		0.5	4.7	1.1	174
		0.25	9.7	0.7	230
SRE	Inferred	1.5	0.0	2.1	2
		0.5	0.3	1.3	11
		0.25	0.7	0.7	15
PROJECT TOTAL	Indicated & Inferred	1.5	19.7	3.7	2,327
		0.5	39.7	2.3	2,909
		0.25	49.0	1.9	3,009
*(RAS NEW 2023 MRE), (CIT, SHR, SRE UNCHANGED 2021 MRE)					

- **Immediate Project objectives are to increase RAS Indicated Resources, implement scoping and development studies and continue activities to define gold mineralisation extents at other prospects along the 30-kilometre Bendigo-Ophir mineralised trend.**
- **Since acquiring the Bendigo-Ophir Project in late 2020, the gold resource increment has been delivered at a 'discovery cost per ounce' of ~A$3.50/oz.**

2 February 2023 Santana Minerals Limited (ASX: SMI) ("Santana" or "the Company") is pleased to announce a significant mineral resource estimate (MRE) update from the 100% owned Bendigo-Ophir Project ("the Project"). Resource extension drilling has focused primarily on the Rise and Shine (RAS) deposit delivering a material increase in resource and grade since July 2022 (ASX announcement on 11 July 2022).

Commenting on this significant new milestone, NZ General Manager Damian Spring said:

"This exciting new milestone of 3Moz confirms our confidence that the Bendigo-Ophir Project is well on track to be a world class discovery. The increase in grade and ounces and the declaration of the maiden Indicated Resource at RAS certainly bolsters possible future mining options. I look forward to leading the Company's ongoing exploration activities including baseline and metallurgical studies, as well as commencing initial scoping studies. There is a great team on the ground and experienced consultants onboard."

2023 Mineral Resource Estimate (MRE)

Gold resources occur in 4 deposits along the RSSZ over a strike length of 4 kilometres (Figure 7). The RSSZ is a major regional structure defined by geology, geochemistry, and geophysics over a strike length of 7 kilometres within the overall 30-kilometre NW-SE length of the Bendigo-Ophir Project.

The 2023 Bendigo-Ophir Project MRE update integrates additional RAS DD drilling results from the six-month period June 2022 to December 2022 as compiled by independent resource estimation consultant GeoModelling Limited (GML), Petone, New Zealand. (Tables 1-7, Appendix 1 Additional Mineral Resource information and Appendix 2 JORC Code Table 1).

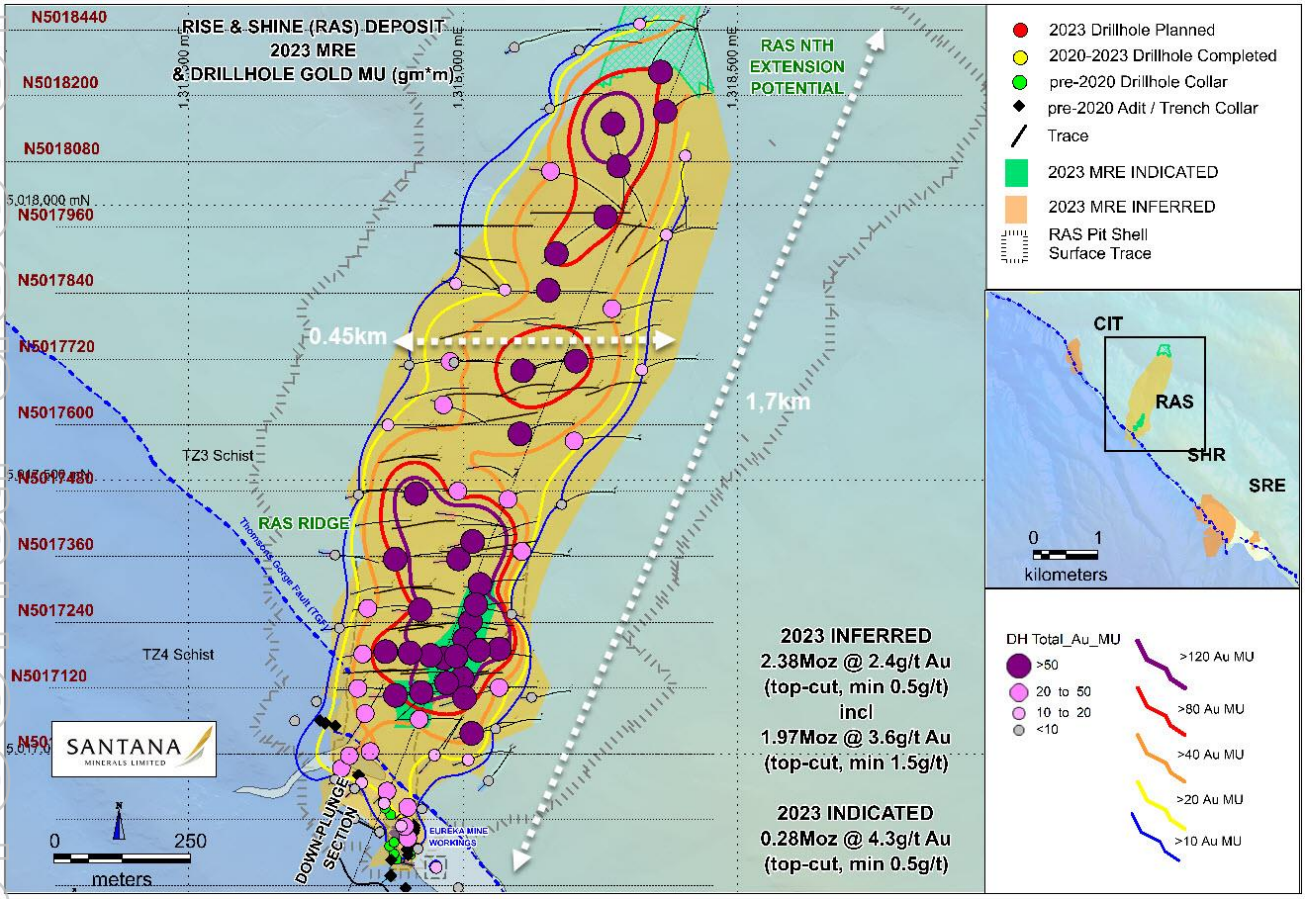

Figure 1 RAS 2022 MRE (top-cut, 0.50g/t Au lower cut-off) and drillhole gold (MU)

GML has estimated the new 2023 RAS resources with top-cuts (to restrict higher grades) and reported at 0.25, 0.50 and 1.5 g/t Au lower cut-off grades (Table 1) constrained within a pit shell optimised using gravity-leach economics with revenue escalated by 30% to allow for the reasonable prospects test. The 0.25 g/t cut-off for open pit resources and 1.50 g/t cut-off for underground resources are considered appropriate grades at this stage of the project based on earlier mining studies which have now been updated to include recent gravity-leach recoverable gold results established from laboratory scale metallurgical testwork (ASX announcement on 11 May 2022).

Table 1: Rise and Shine (RAS) Deposit Feb 2023 MRE Summary

RAS Mineral Resources by lower cutoff (top-cut) - Feb'23				
category	cutoff (Au g/t)	tonnes (Mt)	Au grade (g/t)	ounces (koz)
Indicated	1.5	1.6	5.0	267
	0.5	2.0	4.3	279
	0.25	2.0	4.3	279
Inferred	1.5	16.8	3.6	1,967
	0.5	31.5	2.4	2,383
	0.25	33.4	2.2	2,408
Indicated & Inferred	1.5	18.4	3.8	2,234
	0.5	33.5	2.5	2,662
	0.25	35.4	2.4	2,687

(* figures rounded for reporting)

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The new 2.66Moz RAS 2023 MRE total of combined Inferred & Indicated resources (top-cut and 0.5g/t Au lower cut-off, Figure 1, Table 1) is a one-million-ounce increase in contained gold over the 1.68Moz RAS 2022 MRE (ASX announcement on 11 July 2022) with a 30% increase in gold grade to 2.5g/t from 1.9g/t.

Significantly, the new 2023 MRE includes:

- **a maiden Indicated category of 0.28Moz of gold @ 4.3g/t derived from the initial RAS Ridge infill drilling at ~40*60 metre centres in the south-east (Figure 2).**
- **an enlarged 2.38Moz inferred resource category (at 0.5 g/t Au lower cut-off, Table 1) which includes an 83% higher-grade gold component (1.97Moz @ 3.6g/t, at 1.5 g/t Au lower cut-off, Table 1).**

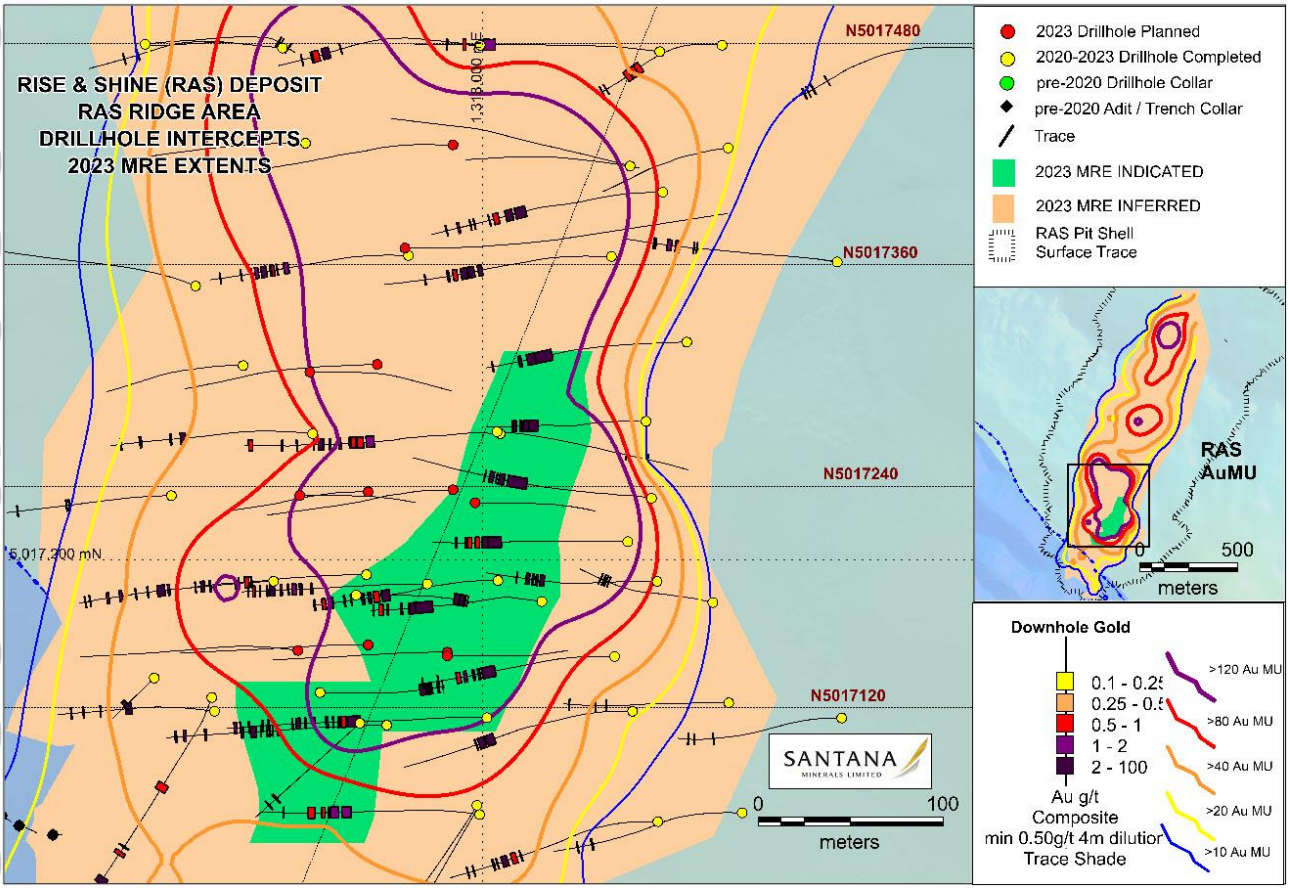

Figure 2 RAS Ridge Indicated & Inferred MRE Extents (top-cut, 0.50g/t Au lower cut-off)

The new RAS 2023 MRE is modelled in 6 domains (as for the July 2022 MRE), with the upper continuous domains 1 and 2 containing 1.83Moz @ 3.2g/t Au and 0.69Moz @ 1.8g/t Au respectively (Table 2). These upper domains have 95% (2.52Moz @ 2.6g/t Au) of the total RAS 2023 MRE total gold (2.66Moz @ 2.5g/t Au).

The RAS Ridge area, with numerous thick high-grade gold intercepts from new drilling (ASX announcement on 29 November 2022) has large gold increments for domains 1 and 2 (0.64Moz & 0.32Moz respectively) over the RAS 2022 MRE domains 1 and 2 (total 1.56Moz), (ASX announcement on 11 July 2022).

Indicated category RAS resources are confined to domains 1 and 2 at RAS Ridge where they extend ~400 metres NNE down-plunge (figures 2 and 4) as defined by infill ~40*60 metre spaced drilling.

Inferred category domains 1 and 2 continuity extends ~1.7km NNE (018°T) down-plunge and ~450 metres in width (Figures 1-5) within the hanging wall shear (HWS), an upper geological unit of the RSSZ. The late cataclastic Thomson Gorge Fault (TGF) defines the top of the RSSZ and separates the HWS from overlying barren TZ3 schist (Figure 4).

All domains (1-6) are interpreted as stacked low-angle (~23° dip) tabular bodies (Figure 4) plunging NNE at an angle sub-parallel to the slope of topography towards Shepherds Creek (Figures 3, 4 & 5). Continuity of lower domains 3-6 (which appear to be confined to the RAS Ridge area) are yet to be clearly defined due to generally narrower intercepts and the broad ~100*120 metre drill spacing.

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Table 2: Rise and Shine (RAS) Deposit by Domain

RAS Mineral Resource by domain 0.50 g/t cutoff					
Domain	**cutoff (Au g/t)**	**category**	**tonnes (Mt)**	**Au grade (g/t)**	**ounces (koz)**
1	0.5	Indicated	1.10	6.1	208
2	0.5	Indicated	1.00	2.3	71
3	0.5	Indicated			
4	0.5	Indicated			
5	0.5	Indicated			
6	0.5	Indicated			
Total	**0.5**	**Indicated**	**2.10**	**4.1**	**279**
1	0.5	Inferred	16.80	3.0	1,617
2	0.5	Inferred	10.70	1.8	620
3	0.5	Inferred	1.70	0.9	50
4	0.5	Inferred	0.60	0.9	17
5	0.5	Inferred	1.20	1.6	60
6	0.5	Inferred	0.60	1.0	19
Total	**0.5**	**Inferred**	**31.60**	**2.3**	**2,383**
1	0.5	(all)	17.90	3.2	1,825
2	0.5	(all)	11.70	1.8	691
3	0.5	(all)	1.70	0.9	50
4	0.5	(all)	0.60	0.9	17
5	0.5	(all)	1.20	1.6	60
6	0.5	(all)	0.60	1.0	19
Total	**0.5**	**(all)**	**33.70**	**2.5**	**2,662**

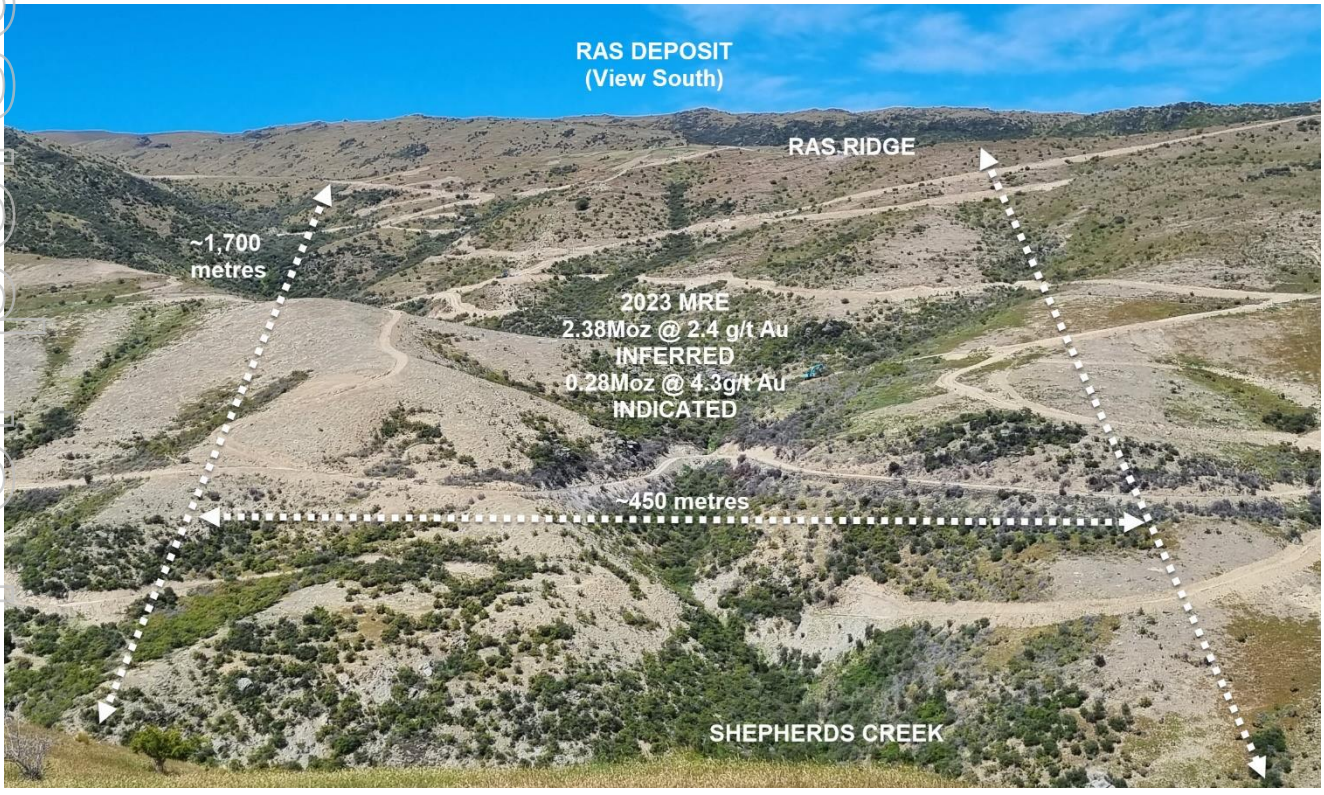

Figure 3 RAS Deposit (View South)

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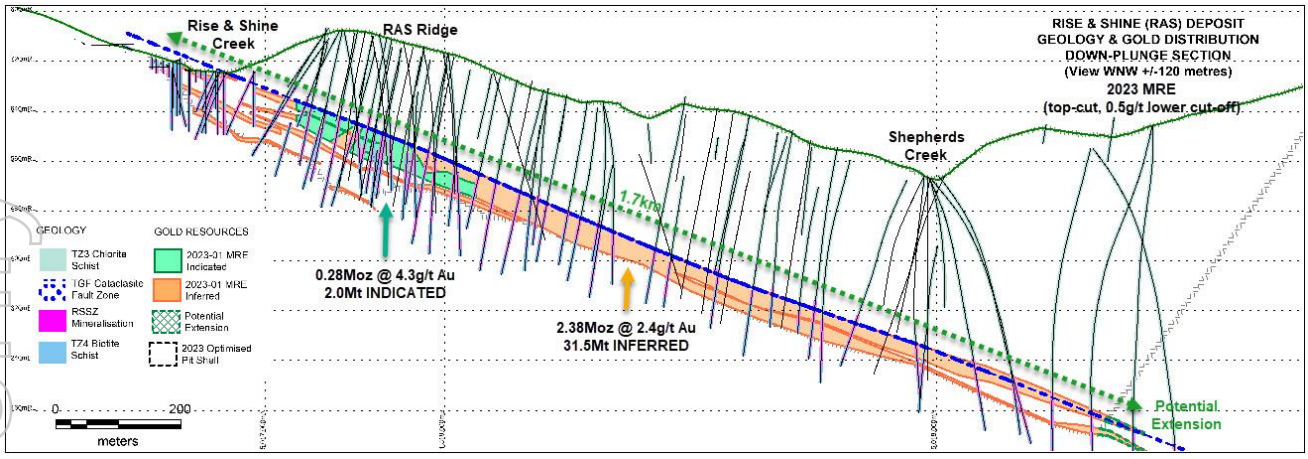

Figure 4 RAS Deposit Down-Plunge Section 2023 MRE Extents (view WNW).

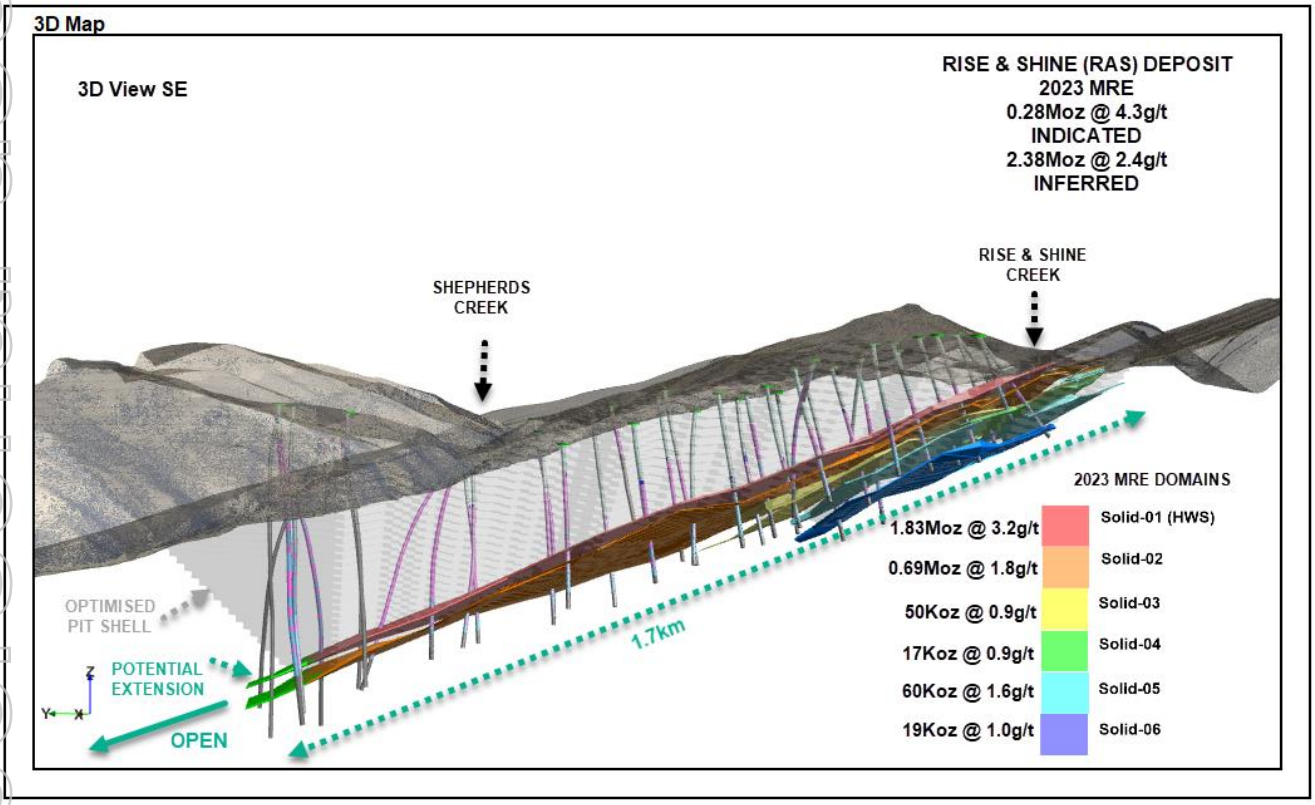

Figure 5 RAS Down-plunge Domains & Resource Extension Potential (3D view SE)

Tonnages (Tables 1,2, Figure 6) are assigned on a dry basis from density measurements of drill core for fresh and transition rock and surface rock samples for oxide rock.

Oxide rock	2.50g/cm^3
Transitional rock	2.65g/cm^3
Fresh rock	2.70g/cm^3

Tonnages and density measurements for CIT, SHR and SRE deposits used for the 2021 MRE are unchanged from those previously reported (ASX announcement on 28 September 2021).

Most of the Global MRE (98%) is fresh sulphide mineralisation. The oxide and transitional mineralisation at RAS is <0.1% of the resource (Appendix 1, Table 6). CIT and SHR Deposits have the highest oxide components, where down-plunge resources have yet to be re-estimated.
All the new Indicated RAS category resource is fresh sulphide mineralisation.

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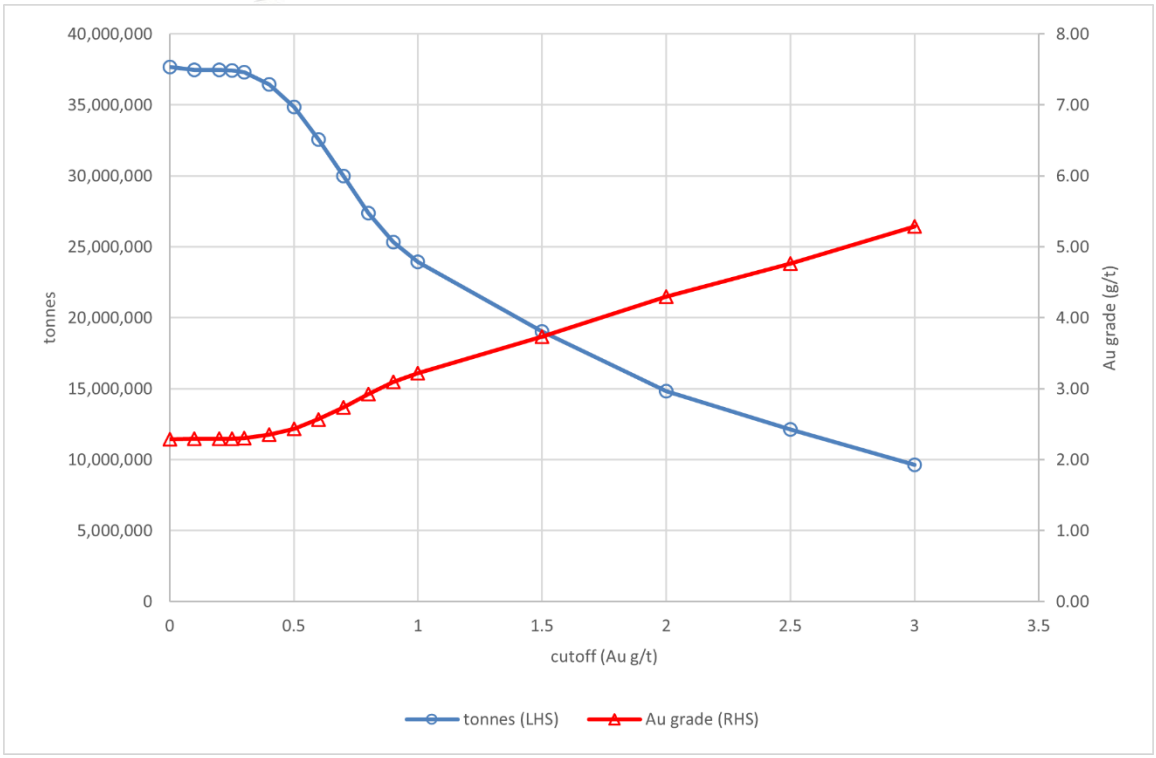

Figure 6 RAS Inferred Resource (top-cut) Grade Tonnage Curve

The Bendigo-Ophir RSSZ global resource (inferred and indicated) within the four deposits (Figure 7) is 2.91Moz at 0.50 g/t Au lower cut-off grade. At a 0.25 g/t Au lower cut-off, the resource increases marginally to 3.01Moz (Tables 3 & 7).

The largest proportion is contributed by the new RAS 2023 MRE (92%) with the balance in previously reported 2021 CIT, SHR and SRE inferred resources estimated by Wildfire Resources Pty Ltd, Perth WA (WRPL) (ASX announcement on 28 September 2021).

There is confidence in the continuity of resources in each deposit, where mineralisation occurs in elongate northward plunging shoots up to 450 metres wide (RAS). The surface footprint at RAS is small compared to the other deposits, particularly SHR. Resources at SHR occur over a greater strike length, but the deposit has not been drilled extensively at depth and the down-plunge geometry of the mineralisation is still to be resolved.

Table 3: RSSZ Global MRE January 2023 by Deposits

Mineral Resources by lower cutoff (top-cut) - Feb'23					
Deposit	category	cutoff (Au g/t)	tonnes (Mt)	Au grade (g/t)	ounces (koz)
RAS	Indicated	1.5	1.6	5.0	267
		0.5	2.0	4.3	279
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		0.5	1.2	1.5	59
		0.25	3.2	0.8	81
SHR	Inferred	1.5	0.8	2.0	52
		0.5	4.7	1.1	174
		0.25	9.7	0.7	230
SRE	Inferred	1.5	0.0	2.1	2
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PROJECT TOTAL	Indicated & Inferred	1.5	19.7	3.7	2,327
		0.5	39.7	2.3	2,909
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*(RAS NEW 2023 MRE), (CIT, SHR, SRE UNCHANGED 2021 MRE)					

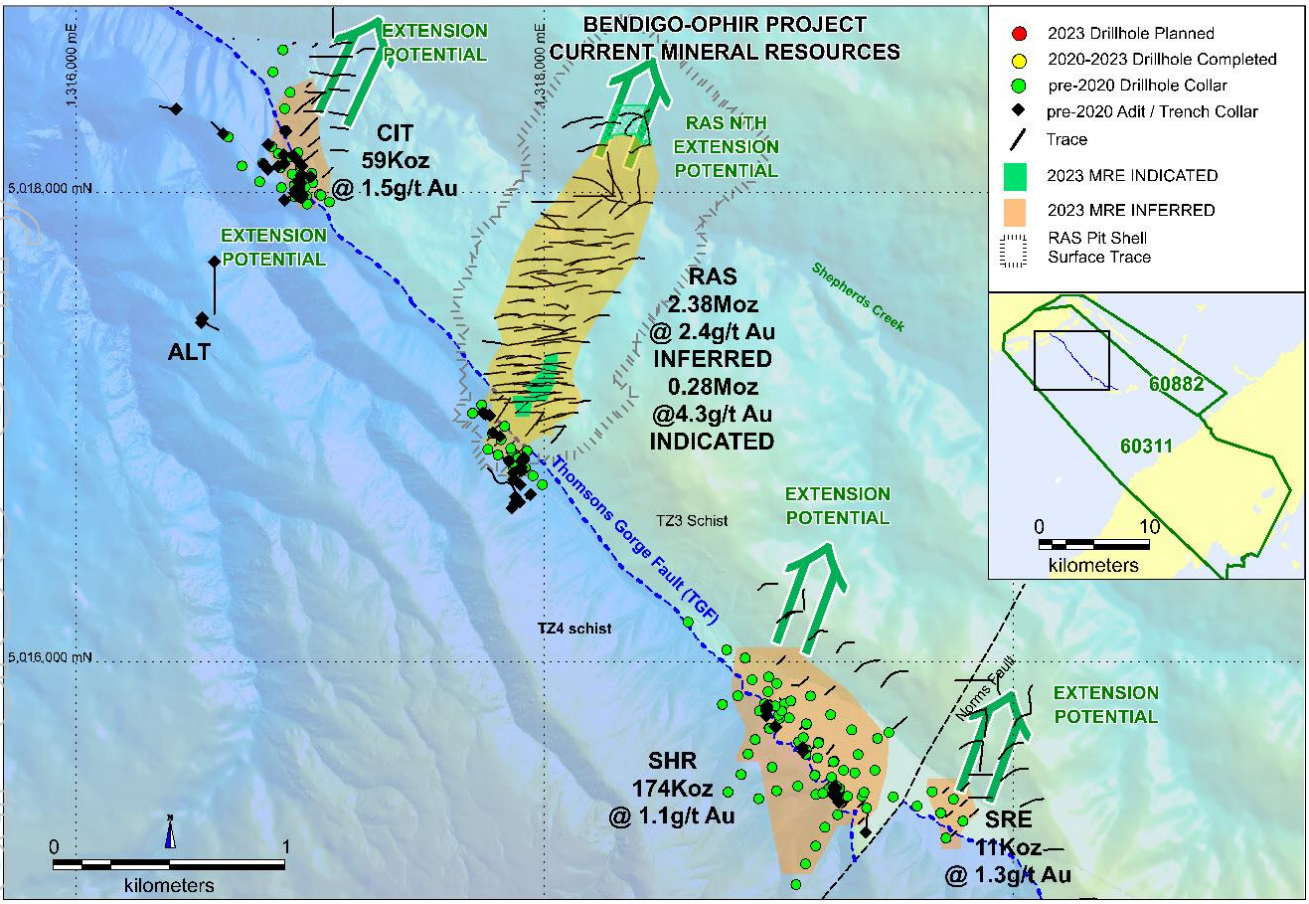

Figure 7 RSSZ 2022 Global Inferred Mineral Resources (MRE) at 0.50g/t Au lower cut-off

Santana has completed over 39,121 metres of diamond and RC drilling since acquiring the Bendigo-Ophir Project in November 2020 with 30,225 metres drilled in 2022 (Table 4). The focus since mid-2021 has been on the northerly down-plunge extensions of RAS.

The updated 2023 MRE is based on assays from an additional 51 diamond drillholes (DD) (17,008 metres) completed at RAS from June 2022 to January 2023 when the MRE database was closed for estimation purposes. Resource estimates at CIT, SHR and SRE will be updated in due course.

Table 4: Summary of RSSZ Drilling to end 2022.

DH Campaign	Company	RAB metres	RAB holes	RC metres	RC holes	DD metres	DD holes	Total metres	% Total
2022	Santana / MGL			814	10	29,411	96	30,225	64
2020-2021	Santana / MGL			3,417	33	5,479	25	8,896	19
2018-2019	MGL			3,641	64			3,641	8
1986-2007	Legacy	315	315	4,186	48			4,501	10
		315	315	12,058	155	34,890	121	47,263	100

*** RAB holes and 2022 RC holes were not used in the 2023 RAS resource estimate.**

Since drilling by Santana commenced in late 2020, resources at RAS have been expanded dramatically from the 8Koz inferred resource at the time of acquisition of the Bendigo Ophir project.

The overall global increase of 2.30Moz from 0.64Moz resources since 2020 has been delivered at a ‘discovery cost per ounce’ of ~A$3.50/oz.

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Forward Programme / Ongoing In-fill & Step-out resource extension drilling

The Company's immediate priority is to continue in-fill drilling of RAS to increase Indicated Resources and implement scoping and development studies. Drilling activities are continuing to define gold mineralisation extents at other prospects along the 30-kilometre Bendigo-Ophir mineralised trend.

This announcement has been authorised for release to the ASX by the Board.

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cpeacock@santanaminerals.com

Current Disclosure - Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Richard Keevers, Mr Kim Bunting who are Fellows of The Australasian Institute of Mining and Metallurgy (AusIMM) and Mr Warren Batt who is a Member of the AusIMM. Mr Keevers is an Executive Director, Mr Bunting a Director and Bendigo-Ophir Project Manager and Mr Batt a Director of the Company who have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which thay are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Keevers, Mr Bunting and Mr Batt consent to the inclusion in this report of the matters based on their information in the form and context in which it appears. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

The information in this report that relates to 2023 RAS Mineral Resource Estimates (MRE) is based on work completed by Mr Kerrin Allwood, a Competent Person (CP) who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Allwood is a Principal Geologist of GeoModelling Limited, Petone, New Zealand and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is 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 Allwood consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. Mr Allwood and GeoModelling Limited are independent of Santana Minerals Ltd.

The information in this report that relates to prior 2021 Mineral Resource Estimates (2021 MRE) for CIT, SHR and SRE deposits completed by Ms Michelle Wild (CP) (ASX announcement on 28 September 2021) continue to apply and have not materially changed.

The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

Forward Looking Statements

Forward-looking statements in this announcement include, but are not limited to, statements with respect to Santana's plans, strategy, activities, events or developments the Company believes, expects or anticipates will or may occur. By their very nature, forward-looking statements require Santana to make assumptions that may not materialize or that may not be accurate. Although Santana believes that the expectations reflected in the forward-looking statements in this announcement are reasonable, no assurance can be given that these expectations will prove to have been correct, as actual results and future events could differ materially from those anticipated in the forward-looking statements. Accordingly, viewers are cautioned not to place undue reliance on forward-looking statements. Santana does not undertake to update publicly or to revise any of the included forward-looking statements, except as may be required under applicable securities laws.

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Previous Disclosure - 2012 JORC Code

Information relating to Mineral Resources, Exploration Targets and Exploration Data associated with the Company's projects in this announcement is extracted from the following ASX Announcements:

- ASX announcement titled "Gold Resources Increased 155% to 643Koz" dated 28 September 2021
- ASX announcement titled "Rise & Shine Mineralisation extends North, Metallurgy Updates" dated 11 May 2022
- ASX announcement titled "Rise & Shine and Come-in-Time Extension Drilling Results" dated 25 May 2022
- ASX announcement titled "Rise and Shine (RAS) mineralisation expands North" dated 2nd June 2022.
- ASX announcement titled "A new 2 Million Ounce Global Inferred Gold Resource Platform" dated 11 July 2022.
- ASX announcement titled "Strong mineralisation intercepts continue at Bendigo-Ophir" dated 20 July 2022.
- ASX announcement titled "MDD054 "Jewellery Box" Drillhole Delivers Exceptional Result" dated 26 July 2022.
- ASX announcement titled "MDD054 Jewellery Box Re-Assays to 1,400g/t Gold" dated 22 August 2022.
- ASX announcement titled "New gold intercepts exceed previous grades & thicknesses" dated 6 September 2022.
- ASX announcement titled "Multiple Gold intercepts beyond all Resource Halos" dated 18 October 2022
- ASX announcement titled "RAS continues to deliver strong gold grades" dated 2 November 2022
- ASX announcement titled "RAS Glows with more high gold grades over wide intervals" dated 29 November 2022

A copy of such announcement is available to view on the Santana Minerals Limited website www.santanaminerals.com. The reports were issued in accordance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

About Santana Minerals Limited Bendigo-Ophir Project

The Bendigo-Ophir Project is located on the South Island of New Zealand within the Central Otago Goldfields. The 292km^2 project area comprises Minerals Exploration Permit (MEP) 60311 (252km^2) and Minerals Prospecting Permit Application (MPPA) 60882 (40km^2) issued to 100% owned subsidiary Matakanui Gold Ltd. The Project is located ~90 kilometres northwest of Oceana Gold Ltd (OGC) Macraes Gold Mine (Figure 8).

The Company embarked on diamond drilling (DD) and reverse circulation (RC) drilling programmes in November 2020 with the immediate objective to fast-track an increase to the existing Resources by drill testing the down plunge extensions of known mineralisation.

The Project contains new Inferred and Indicated Global Mineral Resource Estimates (MRE) to 1.5, 0.5 and 0.25g/t Au lower cut-offs (Table 5):

Table 5: Bendigo-Ophir Global RSSZ Resources Summary-new 2023 MRE.

cutoff (Au g/t)	category	tonnes (Mt)	Au grade (g/t)	ounces (koz)
1.5	Indicated	1.60	5.0	267
0.5	Indicated	2.00	4.3	279
0.25	Indicated	2.00	4.3	279
1.5	Inferred	18.10	3.5	2,060
0.5	Inferred	37.70	2.2	2,630
0.25	Inferred	47.00	1.8	2,730
1.5	(all)	19.70	3.7	2,327
0.5	(all)	39.70	2.3	2,909
0.25	(all)	49.00	1.9	3,009

These estimates are based on drill results to Dec 2022 and reported in Jan 2023 which the Company interprets has the potential to be further expanded and developed into a low-cost gravity-leach operation, with ore from bulk tonnage open pits or underground sources.

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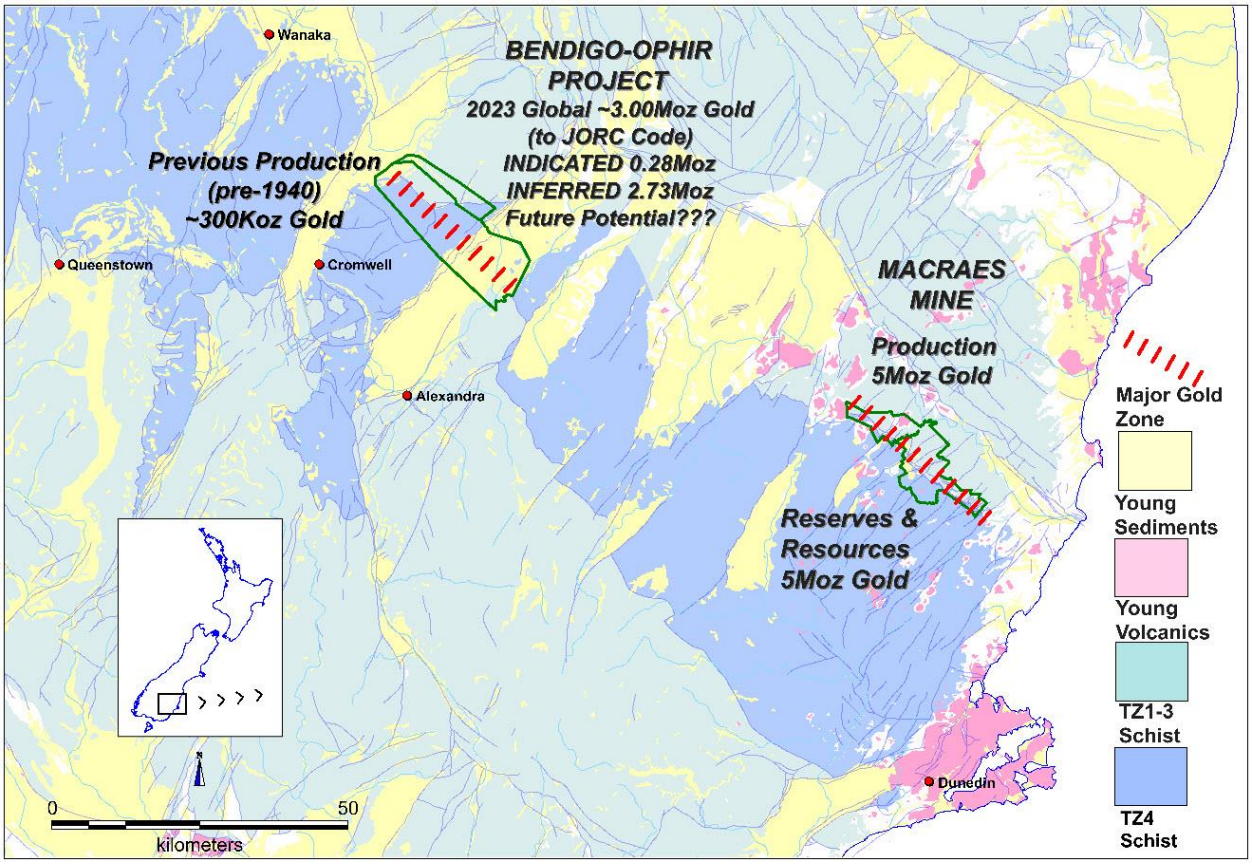

Figure 8 Bendigo-Ophir Project in the Otago Goldfield, ~90km NW of Macraes

The Bendigo-Ophir Resources occur in 4 deposits (Figure 7) that are inferred to extend in a northerly direction within the RSSZ which hosts gold mineralisation over a recognised strike length of >20km (Figure 8).

The RSSZ occurs at the contact with TZ3 and TZ4 schist units separated by a regional fault (Thomsons Gorge Fault-TGF) and dips at a low angle (25°) to the north-east. The RSSZ is currently interpreted to have upper shear-hosted gold mineralisation (HWS) 10-40 metres in width above quartz vein and stockwork related gold mineralisation extending >120 metres below the HWS.

The Company is focusing on advanced precious metals opportunities in New Zealand and Mexico.

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Appendix 1 - Additional RAS Mineral Resource Estimate Information

Sampling

This Rise and Shine (RAS) Mineral Resource Estimate (MRE) is based on 22 RC holes (2,004.5m) and 91 DD holes (27,331.46m). 78 wet RC samples were omitted from use in the resource estimate due to concerns about downhole sample contamination and bias due to the washing away of fines. Similarly, 96 legacy 'blasthole' samples, 71 surface trench and 14 underground channel samples were omitted from use in the resource estimate due to the absence of documentation describing sampling methods.

RC drilling was sampled using a three-tier riffle splitter producing a 2kg – 4kg 12.5% sub-sample. DD core was triple tube PQ3 and HQ3. Core orientation is attempted on each DD run and successful unless the rock is broken. DD core is sub-sampled as half core using a core saw unless friable or unconsolidated in which case a trowel is used. DD core is sampled from approximately 5 m above the TGF to the end of hole. The TZ3 schist above the TGF is uniformly un-mineralised.

Assaying & QAQC

13,500 fire assays (FA) and 197 screen fire assays (SFA) were available for use in the MRE. All the fire assays were prepared by crushing the entire sample to 80% passing 2mm. Prior to 2019 a 200g rotary split sub-sample was pulverized in a ring mill to 85% passing 75µm. A 50g charge was then sub-sampled and assayed by fire assay with AAS analysis. 877 samples were assayed this way. After 2019 the sample preparation procedure was changed so that a 1000g rotary split sub-sample was pulverized in a ring mill to 85% passing 75 um from which a 50g charge was sub-sampled and fire assayed. 12,623 samples were assayed this way. Where multiple assay results exist for a single sample an assay method ranking was used to select data for export from the database with SFA > 1000g pulp FA > 200g pulp FA.

Field duplicates, coarse blanks, pulp standards, pulp duplicates, pulp replicates and umpire laboratory pulp repeats are all used at a rate of 1 per 20 routine samples to assess sample quality. The results of these QC samples show no material assay bias. Standards and blanks perform well. Pulp duplicates, pulp repeats and umpire laboratory pulp repeats show no bias but high variance. The high pulp variance is attributed to the presence of coarse gold forming flakes in the ring mill. The presence of coarse gold is demonstrated by logged visible gold, optical mineralogy (up to 400 µm) and preliminary metallurgical testwork.

The coarse rejects of 328 selected samples were assayed by SFA of a 500g sub-sample with the screen size 75µm. Of these a further 145 500g coarse reject sub-samples were also assayed by Photon assays and BLEG assays. The results of these assays showed comparable results to the paired FA results.

Snowdon – Optiro have recently undertaken a desktop review of the assay methods and QC sample results and concluded that the sampling and assaying methods are in line with standard industry procedures. Snowden Optiro consider that the assay data in the supplied database is suitable to be used as the basis for a Mineral Resource Estimate.

Surveying & Density Measurements

Drill collar locations are surveyed by RTK GPS. The surface topography was surveyed by LiDAR. Prior to drillhole MDD065, all downhole surveys were carried out by Reflex multi-shot tool at an average of 7m downhole for DD and 50m for RC. RC downhole surveys continue to be taken with the Reflex multi-shot tool within the inner stainless-steel tube behind the hammer. Post MDD065 (10 August 2022) all diamond holes have been surveyed using a north seeking Precision Mining and Drilling gyro survey tool with survey records at 1m intervals.

The bulk density of 970 core samples was measured by core immersion. The core was not routinely coated, allowing water to penetrate voids, however the rocks have very low porosity due to metamorphism. 100 samples of fresh (un-weathered) core were tested by the routine method and by wax coating to check for the effect of the water ingress on the bulk density measurements. There was no difference in the average value or the CV of the two methods.

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Resource Estimation

Six gold grade estimation domains were interpreted at a nominal 0.1 – 0.2 g/t Au, a minimum width of 2 m, using the Thomson Gorge Fault (TGF) interpretation as a guide to geometry and pXRF arsenic (As) results to resolve discontinuous zones (where it was not clear if the gold mineralisation was continuous). The estimation domain was based on gold grades because there is no clear lithological or alteration association with gold mineralisation and because, apart from the footwall of the TGF the domain boundaries are gradational. 0.1 g/t Au domain grade criteria was selected because it is sufficiently below the likely resource reporting cut-off grade (0.25 g/t) that the resource would largely be constrained by block grade estimation rather than interpretations based on sample support.

Oxidation domains were interpreted from logged oxidation and weathering. Weathering is shallow with complete oxidation typically to 10m depth and partial oxidation a further 10 m – 20 m below.

The raw assay data was composited to 2.0m, honouring gold domain boundaries with composites less than 1.0m long distributed equally within their domain. All statistics, variography and grade interpolation was done using the composited data.

The coefficient of variation (CV) of the composites in the 6 gold domains ranged from 1.8 to 6.1.

Top cuts determined from log histograms and cumulative probability plots were applied to the composites by domain, being 50 g/t Au, 25 g/t Au, 7 g/t Au, 3 g/t Au, 10 g/t Au in domains 1, 2, 3, 4, 5, and 6 respectively. After top cutting the CV of the composites was reduced to range from 1.4 to 2.6.

The same variogram model was used in all domains. The variogram model was determined from experimental variograms of normal score transformed composites (no top cut). The variogram model was back transformed for use in ordinary kriging. The back transformed variogram model had a relative nugget effect of 83% and two sills. The major axis was parallel to the plunge of the shoots (23/018), the semi-major axis 08/112 and the minor axis 65/220. The total ranges were 120m for the major axis, 140m for the semi-major axis and 35m in the minor axis direction.

Blocks were interpolated by ordinary kriging of the top cut composites using a minimum of 4 and a maximum of 15 composites from within a 150m by 150m by 50m ellipsoid oriented parallel to the variogram model. A maximum of 7 composites were used per quadrant from a minimum of two quadrants. Gold domain boundaries were treated as hard boundaries. Parent blocks were 25m (E) by 25m (N) by 5m (vertical), sub-blocked to 6.25m by 6.25m by 0.5m. The block model parent blocks are approximately 25% of the typical drill spacing. The parent block size was selected as a compromise between honouring the domain geometry / volume and minimizing block grade estimation error.

Bulk density was assigned to the block model by oxidation domain based on the median values of the bulk density samples by oxidation domain. No significant difference was found in the median value of bulk density data between mineralised and un-mineralised samples.

The block model was validated against drilling grades visually in section and in plan, by the use of swath plots and by comparison of the block model volumes to domain wireframe volumes.

The MRE was classified using input data quality, confidence in the geological interpretations and the kriging slope of regression (a function of grade continuity and data (drilling) configuration). In general, indicated resources are reported from continuous zones of un-ambiguous geological interpretation, from blocks less than 25m to the nearest composite and kriging slope of regression greater than 0.5.

The resource reporting cut-off grade and the assessment of *reasonable prospects of eventual economic extraction* are based on metallurgical recovery indicated by gravity / CIL test work, processing, mining and G & A costs from comparable projects and revenue from a gold price of USD$1500/oz escalated by 30% to allow for reasonably foreseeable future gold prices within the anticipated 5 to 20-year mine-life. The resource estimate was constrained at depth by a pit shell optimised using these economic factors and an assumed overall pit slope of 48°.

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Table 6 - Global RSSZ Resource Estimate by Oxidation reported at a 0.25 g/t cut-off. (Totals may not sum due to rounding).

Mineral Resource by Oxidation 0.25 g/t cutoff						
	OX zone	cutoff (Au g/t)	category	tonnes (Mt)	Au grade (g/t)	ounces (koz)
RAS	Oxide	0.25	Indicated	0		0
	Transition	0.25	Indicated	0		0
	Fresh	0.25	Indicated	2.0	4.3	279
	Oxide	0.25	Inferred	0.1	0.6	1
	Transition	0.25	Inferred	0.1	0.7	2
	Fresh	0.25	Inferred	33.3	2.2	2,405
CIT	Oxide	0.25	Inferred	0.4	1.0	14
	Transition	0.25	Inferred	0.6	0.7	7
	Fresh	0.25	Inferred	2.5	0.8	61
SHR	Oxide	0.25	Inferred	1.1	0.7	25
	Transition	0.25	Inferred	0.7	0.7	15
	Fresh	0.25	Inferred	7.9	0.7	190
SRE	Oxide	0.25	Inferred	0.0	0.3	0
	Transition	0.25	Inferred	0.0	0.3	0
	Fresh	0.25	Inferred	0.7	0.7	15
Total	Oxide	0.25	Indicated	0	0	0
	Transition	0.25	Indicated	0	0	0
	Fresh	0.25	Indicated	2.0	4.3	279
	Oxide	0.25	Inferred	1.7	0.8	40
	Transition	0.25	Inferred	1.4	0.6	24
	Fresh	0.25	Inferred	44.4	1.9	2,671
Grand Total		0.25	Inferred	49.4	1.9	3,014

Table 7 Global RSSZ resource estimates by cut-off grade. (Totals may not sum due to rounding).

Mineral Resource by cutoff					
	cutoff (Au g/t)	category	tonnes (Mt)	Au grade (g/t)	ounces (koz)
RAS	1.5	Indicated	1.6	5.0	267
	0.5	Indicated	2.0	4.3	279
	0.25	Indicated	2.0	4.3	279
	1.5	Inferred	16.8	3.6	1,967
	0.5	Inferred	31.5	2.4	2,383
	0.25	Inferred	33.4	2.2	2,408
CIT	1.5	Inferred	0.5	2.4	36
	0.5	Inferred	1.2	1.5	59
	0.25	Inferred	3.2	0.8	81
SHR	1.5	Inferred	0.8	2.0	52
	0.5	Inferred	4.7	1.1	174
	0.25	Inferred	9.7	0.7	230
SRE	1.5	Inferred	0.0	2.1	2
	0.5	Inferred	0.3	1.3	11
	0.25	Inferred	0.7	0.7	15
Total	1.5	Indicated	1.6	5.0	267
	0.5	Indicated	2.0	4.3	279
	0.25	Indicated	2.0	4.3	279
	1.5	Inferred	18.1	3.5	2,060
	0.5	Inferred	37.7	2.2	2,630
	0.25	Inferred	47.0	1.8	2,730
Grand Totals	1.5	(all)	19.7	3.7	2,327
	0.5	(all)	39.7	2.3	2,909
	0.25	(all)	49.0	1.9	3,009

Appendix 2 – JORC Table 1

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JORC Code, 2012 Edition – Table 1

This table 1 relates to the Rise and Shine (RAS) Mineral Resource Estimate (MRE) only.

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*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.*	This Mineral Resource Estimate (MRE) is estimated from drilling samples collected by reverse circulation (RC; 22 holes for 2,004.5m) and diamond (DD; 91 holes for 27,331.46m) drilling. 'Blasthole', surface trench and underground channel samples were used as an aid for geological interpretation and domaining but not for grade estimation. RC samples were sub-sampled at 1.0 m intervals using a 3 tier Jones riffle splitter yielding a 12.5% sub-sample of 2 – 4 kg. DD samples were sub-sampled as half core cut perpendicular to the regional foliation and veining if present. Almost all DD samples were 1.0 m except a few (<3%) cut to geological boundaries. Gold assays were determined by fire assay (FA; 13,500 samples) and screen fire assay (SFA; 197 samples). All of the fire assays were prepared by crushing the entire sample to 85% passing 2mm. Prior to 2019 a 200g rotary split sub-sample was pulverized in a ring mill to 85% passing 75µm. A 50g charge was then sub-sampled and assayed by fire assay with AAS analysis. 877 samples were assayed this way. After 2019 the sample preparation procedure was change so that a 1000g rotary split sub-sample was pulverized in a ring mill to 85% passing 75 um from which a 50 g charge was sub-sampled and fire assayed. Where multiple assay results exist for a single sample an assay method ranking was used to select data for export from the database with SFA > 1000g pulp FA > 200g pulp FA. All pulps are returned to Matakanui Gold (MGL, a wholly owned subsidiary of Santana) and then analysed by portable XRF (pXRF). Only arsenic results from the pXRF data were used in the MRE and then only as an aide to gold domain interpretation. QAQC samples are anonymously inserted into the sample stream to

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Criteria	JORC Code explanation	Commentary
		assure and assess laboratory quality. QAQC samples are field duplicates (1 in 20), coarse blanks (1 per 20), pulp standards (1 per 20), pulp duplicates (1 per 20), pulp replicates (1 per 20) and umpire laboratory pulp repeats (1 per 20). Results of the QAQC data show no material assay bias. Standards and blanks perform well. Pulp duplicates, repeats and umpire laboratory repeats show no bias but high variance. The high pulp variance is attributed to the presence of coarse gold forming flakes in the ring mill. The presence of coarse gold is demonstrated by logged visible gold, mineralogy (up to 400µm) and preliminary metallurgical testwork. The coarse rejects of 328 selected samples were assayed by SFA of a 500g sub-sample with the screen size 75µm. Of these a further 145 500g coarse reject sub-samples were also assayed by Photon assays and BLEG assays. The results of these assays showed comparable results to the paired FA results. Snowdon Optiro have recently undertaken a desktop review of the assay methods and QC sample results and concluded that the sampling and assaying methods are in line with standard industry procedures. Snowden Optiro consider that the assay data in the supplied database is suitable to be used as the basis for a Mineral Resource Estimate. The gold mineralization occurs as a series of sub-parallel vein stockworks in the footwall of the Thomsons Gorge Fault (TGF). The gold mineralization at RAS is almost entirely free gold but with some evidence of very minor very fine (refractory) gold associated with arsenic (arsenopyrite and/or pyrite). SFA data shows that below about 0.5 g/t almost all of the gold occurs in the fine (<75µm) fraction, as the grade rises above 0.5 g/t the coarse (>75µm) gold fraction increases so that by about 3 g/t coarse gold accounts for about 50% of the gold. The sampling, sub-sampling and assaying methods are appropriate to the geology and mineralization of the RAS deposit.

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Criteria	JORC Code explanation	Commentary
Drilling techniques	*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).*	RC drilling used a face sample bit with sample collected in a cyclone mounted over a 3-tier riffle splitter producing 2 x 12.5% splits and 1 x 75% split. The 2 12.5% splits were used as primary sample and field duplicate (if submitted) with the 75% split used for logging and then stored at the MGL core yard. DD drilling comprises triple tube PQ3 and HQ3 core through mineralization below open hole (mud and blade bit) pre-collars drilled to approximately 20m above the expected TGF. Core orientation was carried out every drill run using a TruCore device. All core orientations were successful except where the core was broken.
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 sample recovery is measured as sample weight recovered. RC sample moisture was logged as dry (83.7% of RC samples), moist (12.0%) or wet (4.3%). All samples logged as wet were omitted from use in this MRE. DD sample recovery averaged 98.6% overall. Sample grades were plotted against drilling recovery by drilling method and no relationship was established. Wet RC samples do show higher grades than dry RC samples. This may be due to wet RC samples coming from higher grade zones or sampling bias due to the loss of fines in wet samples. Whatever the cause, this bias was the reason that wet RC samples were omitted from use in this MRE
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.*	RC chips were sieved and logged for lithology, colour, oxidation, weathering, vein percentage and sulphide minerals. DD core was logged as for RC drilling, but with the addition of oriented structural measurements of geological and geotechnical features and logged RQD. The logging is qualitative in nature and of sufficient quality and detail for resource estimation. All core is digitally photographed at high resolution wet and dry. Sieved RC chips are also photographed.

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Criteria	JORC Code explanation	Commentary
		100% of all relevant (within the gold grade domains) intersections were logged
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.*	DD samples were all half core sampled by core saw, or where the core was friable or unconsolidated by a scoop, at 1.0m intervals. The mineralization contacts are gradational and so regular sample lengths are appropriate. The exception is the footwall of the TGF where the contact is sharp; the TGF footwall contact was always honoured by sampling. RC samples were sub-sampled by a 3-tier riffle splitter as described above. The drilling sub-sampling methods are appropriate to the geology and style of mineralization. QA Procedures used to maximise the representivity of sub-samples include the use of a riffle splitter on the RC rig, cutting DD core perpendicular to the regional foliation. The proportion of every 10th sample passing 75um is reported by the laboratory and monitored to ensure sample preparation quality. Field duplicates of RC samples are taken at the time of sampling and stored for later use if necessary. Calculations based on Pitard (1993) show that sub-sample masses are appropriate to gold particle size and grade if the size and shape of the gold particles are reduced in the ring mill in a similar way to the gangue particles.

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Criteria	JORC Code explanation	Commentary
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	FA and SFA are both total gold assays and are appropriate to the RAS mineralization. No geophysical tools have been used in this MRE. The QC procedure used are the insertion of field duplicates, blanks and standards, pulp duplicates (repeats in the same batch) and pulp replicates (repeats in a separate batch) all at a rate of 1 in 20. Pulp duplicates are also sent to an independent umpire laboratory at a rate of 1 in 20. Crusher coarse rejects are assayed by SFA from selected samples at a rate of 1 in 30 (of the whole sample stream). Results are checked against tolerances before import into the database. The results show no evidence of cross contamination or bias. Pulp duplicate and replicate results show reduced precision with 20% of paired results falling outside +/- 20% tolerance. This is attributed to the presence of coarse gold forming flakes in the mill causing inhomogeneity in the pulps. A check programme of re-sampling of coarse rejects for assay by screen fire assay, photon assay and BLEG assays has found comparable levels of variability in these larger volume assay methods compared to the fire assay data. Overall, the assay data is considered to be of sufficient quality for use in mineral resource estimation.

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Criteria	JORC Code explanation	Commentary
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.*	Significant intersections are visually checked by company personnel. There are no twin holes in the RAS area. One pair of twined RC holes was drilled by MGL at the nearby (~1km) Shreks deposit. This pair showed good agreement between the holes. Prior to 2021 all holes were logged on paper logs and later transcribed into spreadsheets before import into an Access database. In late 2021 the Access database was migrated into a PostgreSQL database maintained by MGL. In October 2022 the PostgreSQL database was migrated to an AcQuire SQL database. From 2021 all logging (including sample and QAQC insertion information) was entered directly into spreadsheets in the field using pick lists. Since October 2022 all logging has been directly entered into the Acquire database using tablets. All collar surveys, downhole surveys and assay results are provided digitally and directly imported into the database. On import into the database validation checks are made for: interval overlaps, gaps, duplicate holes, duplicate samples and out of range values. The database is stored in the cloud, backed up daily with weekly backups stored with MGL. The only adjustment made to the data on import to the database is to convert below detection results to negative the detection limit. Samples with multiple Au results are ranked by assay method (SFA > FA > other) and on export only the highest ranked method is exported. Prior to import into Minesight software the data is further validated as above plus checks on the highest and lowest values. Negative below detection results are converted to half the detection limit on import into Minesight.
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.*	All drill collars used in this MRE were located by RTK GPS. There are very minor historical adits and shafts at RAS. No surveys of these voids exist, although at least one adit is still accessible. Historical production records total 630.5 tons of ore crushed. Such small volumes are not material to this MRE. RC downhole surveys are taken within the inner tube. The rod and inner tube behind the hammer were stainless steel and so are non-magnetic. RC

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Criteria	JORC Code explanation	Commentary
	Quality and adequacy of topographic control.	drill holes were surveyed using a Reflex magnetic multi-shot tool at an average downhole depth of 50m. All diamond drill holes prior to MDD065 were surveyed using a Reflex magnetic multi-shot tool at an average downhole distance of 7m. Post MDD065 (10 August 2022) all diamond holes have been surveyed using a north seeking Precision Mining and Drilling gyro survey tool with survey records at 1m intervals. Surveys are run in and out of the hole and the survey data is compared to ensure survey accuracy. All work has been carried out in the NZTM2000 map projection using the NZVD2016 datum. Topographic control is provided by LiDAR topographic surveys in 2018 and 2021 covering the entire project area. These are very accurate and suitable for resource estimation.
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.*	Drill spacing is typically 40m by 40m near in the shallow portions of the MRE, increasing to 100 m (EW) by 120 m (NS) at depth. The drilling data is sufficient to establish the geological and grade continuity to the level necessary for the classification of resources being reported. Some of the RC drilling was sampled as 4m composites and later re-sampled if the composite result exceeded a threshold. There are no composited samples within the gold grade estimation domains and so no composited samples were used in this MRE.
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 and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Almost all of the DD drilling was drilled at (typically) -65° towards 270°. 4 DD holes were drilled towards at -65° 090° to check for cross structures and another 2 DD holes were drilled at -50° towards 000° as no suitable drill pad locations were available on their designed section. Most RC holes were drilled either vertically or at -60° towards 228°. All the drilling is at a high angle to the main controlling fault – the TGF. Oriented downhole data shows that some veins dip steeply and so there

Criteria	JORC Code explanation	Commentary
		may be some mineralization that is not parallel to the TGF. This uncertainty is reflected in the resource classification.
Sample security	*The measures taken to ensure sample security.*	DD core is transported daily from the rig to the core yard. RC and DD samples are put into polyweave bags secured with zip ties. The polyweave bags are placed into a steel cage or strong wooden box for transport to the laboratory by a local freight company. Photographs are made of the consignment before and on arrival at the laboratory and compared to the original dispatch condition.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Snowdon – Optiro have recently undertaken a desktop review of the assay methods and QC sample results and concluded that the sampling and assaying methods are in line with standard industry procedures. Snowden Optiro consider that the assay data in the supplied database is suitable to be used as the basis for a Mineral Resource Estimate. Sampling and QAQC protocols were regularly reviewed by Wildfire from 2017 until 2021. Recommendations made have been implemented.

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Section 2 Reporting of Exploration Results

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 licence to operate in the area.*	The MRE is located within Mineral Exploration Permit (MEP) 60311, held for a 5-year term with a renewal date of 12/4/2023. An application to extend the period of duration has been accepted for processing by NZ Petroleum and Minerals. A 1.5% net smelter return royalty is held over MEP60311 payable to an incorporated company (Rise and Shine Holdings Ltd) owned by the shareholders of MGL prior to the acquisition of MGL by Santana Minerals Ltd in 2020.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Gold mineralization was discovered on the RSSZ in the 1800s. Minor gold mining from shallow pits, adits and alluvial mining took place from the late 1800s through to the 1930s. Most of the gold was produced from alluvial workings. Modern exploration of RAS commenced in 1981 by Amoco who collected rock chip samples up to 5.1 g/t Au. In 1983 Placer Pacific Ltd reported 2m @ 15.5 g/t Au from sampling in the adit. In 1986 Homestake drilled 2 RC holes. In 1996 Aurum Reef Resources Ltd drilled 7 'blastholes', with a best intercept of 1m @ 3.58 g/t Au. In 2005-06 CanAlaska Ventures Ltd drilled 8 RC holes intersecting 7m @ 4.07 g/t Au in RCB037. From 2017 until the acquisition by SMI, MGL completed channel sampling in 2 trenches, 7 roadcuts and 1 adit and have drilled 12 RC holes for 1,120.8m, 1 DD hole from surface for 114.6m and 37 DD holes with open hole pre-collars for 11,498.5m.

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Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	Gold mineralization is hosted by greenschist facies meta-sediments. Gold mineralization at RAS occurs in the footwall of the Thomson Gully Fault (TGF), a late (brittle) re-activation of part of the RSSZ. Gold mineralization occurs in silicified, segregated schist and quartz vein stockworks developed sub-parallel to the TGF. The best gold grades occur in the most segregated schist. Arsenopyrite and pyrite are associated with the mineralized quartz veins. Gold mineralization occurs as free gold with a minor (<10%?) component associated with high arsenic zones (arsenopyrite or arsenian pyrite?). The RSSZ is a low angle, ductile thrust fault separating textural zone 3 (TZ3) hanging wall rocks from higher metamorphic grade textural zone 4 (TZ4) footwall rocks. Four mineralized shoots have been discovered to date in the footwall of the TGF - Come-in-Time (CIT), Rise and Shine (RAS), Shreks (SHR) and Shreks East (SRE). All four shoots plunge about -25° towards 025°. The controls on the shoot orientations are not yet established. There is some evidence of minor sub-vertical post-mineralisation off-setting faults striking north-south.

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.*
		Not applicable as no exploration results are being reported.

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Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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.*	Not applicable as no exploration results are being reported.
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 (eg 'down hole length, true width not known').*	Not applicable as no exploration results are being reported.
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.*	Refer to images in the announcement text.
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.*	Not applicable as no exploration results are being reported.

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Criteria	JORC Code explanation	Commentary
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.*	Not applicable as no exploration results are being reported.
Further work	• *The nature and scale of planned further work (eg 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.*	Exploration of the RSSZ for additional shoots and step out drilling of the RAS shoot to increase the size of the RAS MRE is ongoing. Planned future work includes continued infill drilling of the RAS shoot to allow resource estimation to a higher category, additional metallurgical test work, environmental, geotechnical and hydrological investigations to allow scoping and pre-feasibility studies into a gold mining and processing operation.

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SANTANA MINERALS LIMITED

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	Collar location surveys, downhole surveys and assay data are imported into the database from digital files provided by external providers. Geological logging, sample information and QAQC sample insertion data are entered directly using picklists into spreadsheets on mobile devices in the field. All source data is archived for later audits. All data is validated on import into the database with checks made for interval overlaps, gaps, duplicate holes, duplicate samples and out of range values. The database structure uses key fields to ensure there are no duplicate drillholes or samples.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	Mr Allwood visited the site in January 2021 and again in December 2022, inspecting RC and DD drilling, logging, sampling, QC insertion practices and site geology. No major issues were identified. Some minor recommendations were made, and these have since been implemented.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	There is good confidence in the large-scale interpretation of the geology. The TGF is easily recognized in core and has a simple tabular geometry. The broad drill spacing makes recognizing small scale (<10 m) variations in geometry such as minor offset faults very difficult. The geological controls on the plunge of the RAS shoot and the eastern and western limits of mineralization are currently poorly known, but such geometry is well defined by drilling data. The gold grade domains were interpreted at nominal 0.1 to 0.2 g/t Au sub-parallel to the TGF. The TGF forms the hanging wall of domain 1 and the upper and lower contacts of all the domains are sub-parallel to the TGF. Logged lithology was used to interpret the TGF, a cataclastic zone at the contact between TZ3 and TZ4. Oriented structural data (specifically quartz veins) was used to confirm the domain geometries. pXRF arsenic data was used as an aid to defining the domain boundaries. The general shape (strike, dip and plunge) of the gold domains 1 and 2 are un-ambiguous. There are possible alternative interpretations on the margins of the domains and where the domains bifurcate. Errors in interpreting the margins of

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		the domain are unlikely to materially affect the resource estimate as the domain criteria (>0.1 g/t Au) are far below the reporting cut-offs (>0.25 g/t Au). Gold domains 3 – 6 are less well defined with plausible alternative interpretations possible. This uncertainty in the geometry of these domains is taken into account for resource classification. The TGF and quartz vein orientations were used to guide the domain interpretations and to inform the orientation of likely variogram model axes. Large scale geological continuity is determined by the continuity of the TGF which has been mapped over a strike length of >20km. Small scale (<100m) factors affecting geological continuity have not been established. The domains closest to the TGF (1 and 2) are very continuous. The domains deeper below the TGF (3 – 6) are less continuous with some internal barren zones. Factors affecting grade continuity include proximity to the TGF, quartz vein continuity and quartz vein density. The best gold grades generally occur immediately below the TGF in domain 1. In the other gold domains gold grades are generally best in the core of the domain and weaken towards the hanging and footwalls. In all domains gold grades weaken towards the eastern and western limits. Oxidation domains were interpreted from logged oxidation
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Domain 1 is the largest domain, extending 1600 m down plunge (023°), is typically 300 m – 450 m wide (E-W) and 4 m to 32 m thick (vertical, average 14 m). Domain 2 extends 1700m down plunge (023°), is 200 m – 450 m wide (E-W) and 2 m to 30 m thick (vertical, average 11 m). Domain 3 extends 800 m down plunge (023°), is 120 m – 300 m wide (E-W) and 2 m to 20 m thick (vertical, average 8 m). Domain 4 extends 400 m down plunge (023°), is 50 m – 300m wide (E-W) and 2 m to 18 m thick (vertical, average 6 m).

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		Domain 5 extends 500 m down plunge (023°), is about 160 m wide (E-W) and 2 m to 14 m thick (vertical, average 6 m). Domain 6 extends 400 m down plunge (023°), is 100 m – 150 m wide (E-W) and 2 m to 16 m thick (vertical, average 6 m).
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	This MRE was made by interpolating gold assays composited to 2.0m by ordinary kriging into a sub-blocked model using Minesight v 16.0.3 software. Geostatistical analysis was carried out using Leapfrog Edge software. Top cuts determined from log histograms and cumulative probability plots were applied to the composites by domain, being 50 g/t Au, 25 g/t Au, 7 g/t Au, 3 g/t Au, 10 g/t Au and 4 g/t Au in domains 1, 2, 3, 4, 5, and 6 respectively. Parent blocks were 25 m (E) by 25 m (N) by 5 m (vertical), sub-blocked to 6.25 m by 6.25 m by 0.5 m. Domain boundaries were hard boundaries. Blocks were interpolated using a minimum of 4 and a maximum of 15 composites from within a 150 m by 150 m by 50 m ellipsoid oriented parallel to the variogram model. A maximum of 7 composites were used per quadrant from a minimum of two quadrants. The same variogram model was used in all domains. The variogram model was determined from experimental variograms of normal score transformed composites (no top cut). The variogram model was back transformed for use in ordinary kriging. The back transformed model had a relative nugget effect of 83% and two sills. The major axis was parallel to the plunge of the shoots (23/018), the semi-major axis 08/112 and the minor axis 65/220. The total ranges were 120 m for the major axis, 140 m for the semi-major axis and 35 m in the minor axis direction. Check estimates were completed on the previous iteration of the MRE using the same parameters except: • No top cut • Outlier restriction at 25m instead of topcut • Alternative HG domains interpreted at a nominal 0.2 g/t Au with topcut • Alternative HG domains interpreted at a nominal 0.2 g/t Au with no topcut

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		• Combined LG/HG domains with topcut • Combined LG/HG domains with no topcut In addition, volume – variance analysis using an affine correction was completed to assess which variants best represented the theoretical grade – tonnage curve. Previous estimates of the gold MRE at RAS have been made in 2019, 2021 and July 2022. The 2019 MRE was of a very small near surface area and not of use for comparison. In areas where the 2021 and 2022 MREs overlap with this MRE, the 2021 and 2022 MREs were lower grade than this MRE because the infill drilling available for this MRE allowed better definition of high-grade zones. There has been no production from RAS to allow reconciliation of the model. No by-products are assumed. pXRF Arsenic grades have been estimated in the block model as a proxy for possible acid mine drainage but are not reported as the pXRF data has not been verified. No acid mine drainage has been indicated by the very limited work to date, likely due to the acid neutralizing capacity of carbonates in mineralization and waste. The block model parent blocks are approximately 25% of the typical drill spacing. The parent block size was selected as a compromise between honouring the domain geometry / volume and minimizing block grade estimation error. Open pit mining is assumed with a likely smallest mining unit (SMU) of about 5m by 5m by 5m. Underground mining is also possible, albeit at a higher cut-off grade (around 1.5 g/t Au). No assumption is made of correlation between variables.

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		The MRE is geologically controlled by the use of domains interpreted with reference to the geological model. Top cuts were applied to the composites prior to grade interpolation as described above. The block model was validated against drilling grades visually in section and in plan, by the use of swath plots and by comparison of the block model volumes to domain wireframe volumes. No reconciliation data is available as mining has not commenced.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages are estimated on a dry basis. Assays are reported as weight proportion of oven (110°C) dried samples. Bulk densities were determined from air dried core by immersion.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The reporting cut-off (0.25 g/t) is based on metallurgical recovery indicated by gravity / CIL test work, processing, mining and G & A costs from comparable projects and revenue from a gold price of USD$1500/oz escalated by 30% to allow for the reasonable prospects test.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Open pit mining at a rate of 1 – 6 Mtpa is assumed. Underground mining is also possible, albeit at a higher cut-off grade (around 1.5 g/t Au). No allowance has been made for mining dilution or mining recovery except that domains were interpreted with a minimum width of 2 m.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Metallurgical test work investigating a gravity – CIL process has resulted in recoveries from 64% to 99% and averaging 89%. Further work is required to determine full processing parameters and economics.

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Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	It is assumed that all permits necessary for commercial gold production shall be obtained. Whilst there has been no specific environmental investigation to date, it was found during metallurgical testing that "Preliminary Acid Mine Drainage characterisation on the six composite samples demonstrated that this was not an issue for these samples". Baseline monitoring of water flows and water quality and studies into flora and fauna have commenced.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	Bulk density was assigned to the block model by oxidation domain based on the median values of 970 measured bulk density samples by oxidation domain. No difference was found in the median value of bulk density data between mineralised and un-mineralised samples. Bulk density was measured by core immersion. The core was not routinely coated, allowing water to penetrate voids, however the rocks have very low porosity due to metamorphism. 100 samples of fresh (unweathered) core were tested by the routine method and by wax coating to check for the effect of the water ingress on the bulk density measurements. There was no difference in the average value or the CV of the two methods. Therefore, MGL continues to use un-coated core for density determinations.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	Input data quality, confidence in the geological interpretations and the kriging slope of regression (a function of grade continuity and data (drilling) configuration) were all considered when classifying the model. In general, indicated resources are reported from continuous zones of un-ambiguous geological interpretation, from blocks less than 25m to the nearest composite and kriging slope of regression greater than 0.5. Resource categorization is based on confidence in the estimation of gold grades only. The resource classification appropriately reflects the Competent Person's view of the deposit.

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Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	This and previous RAS MREs have not been audited or reviewed as the project is at an early stage of development.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The relative accuracy and confidence in the MRE is reflected in the resource classification. No quantitative assessment of errors has been made. The RAS MRE is a global estimate intended to give the best global grade – tonnage relationship, suitable for use in long term planning but not for local (block scale) estimates. No production data are available for reconciliation as mining has not commenced.