For personal use only

ASX RELEASE
ASX:SMI

2 April 2024

Shiny outcomes from latest metallurgical test work at RAS

Santana Minerals Limited (ASX: SMI) ("Santana" or "the Company") is pleased to advise it has received the next phase of metallurgical test work results from the Rise and Shine (RAS) gold deposit.

Testing was carried out on a representative master composite sample and 10 variability composite samples of half diamond drill core taken from the deposit (see Figure 1). The sample was selected to represent a run-of-mine likely ore-feed in the initial years of open pit mining at RAS.

A simple and conventional gold processing flowsheet is expected with moderate to low operating costs and strong gold recoveries, on a comparable basis.

Comminution test work

- Average Crusher Work Index (CWI) of 5.15 kWh/tonne
- A Bond Ball Work index of 19.0 kWh/tonne
- SAG Circuit Specific Energy averaging 9.18 kWh/tonne (range 8.52 to 10.75kWh/tonne)

Leach/Grind test work

- An optimal grind size of 106 micron (µm) was determined with a **peak leach recovery of 94.9%** after 8 hours and reducing to **93.6% after 24 hours**. Reagent consumption was 0.49kg/t of CN and 0.11 kg/t of lime
- A total **gravity recoverable** (laboratory scale) estimate at 300 micron (µm) was **62.5% gold** (range 57.0% and 64.7%)

Flotation test work

- Gold recoveries from standard pyrite flotation tests were sub-optimal eliminating any concept of flotation in the circuit

The latest works were completed by expert consultants, Independent Metallurgical Operations Pty Ltd in Perth and overseen by metallurgical engineers and plant builders, MACA-Interquip, also of Perth, Western Australia.

Santana's CEO, Damian Spring said:

> *"Another very meaningful result for the Company that rapidly advances the development of this project. To achieve such high gold recoveries using a conventional gravity and CIL gold processing flowsheet is remarkable and underpins the process design and cost estimates underway as part of our prefeasibility study.*
>
> *The combinations of low chemical consumption, lower cost hydro power, access to good quality water, a willing local workforce and minimal environmental impact will all make for a low-cost project at the cutting edge of responsible mining."*

Enquiries:

Damian Spring
Exec. Director & CEO
dspring@santanaminerals.com

Sam Smith
Exec. Director Corp Affairs & IR
ssmith@santanaminerals.com

For personal use only

RAS Deposit – metallurgical test work

A master composite sample weighing 102.4kg with an average grade of 2.56g/t gold, was taken from stored half-diamond drill core of 10 holes within the southern area of RAS, representing the likely ore feed within the initial phases of open pit mining (see Figure 1 below for hole locations).

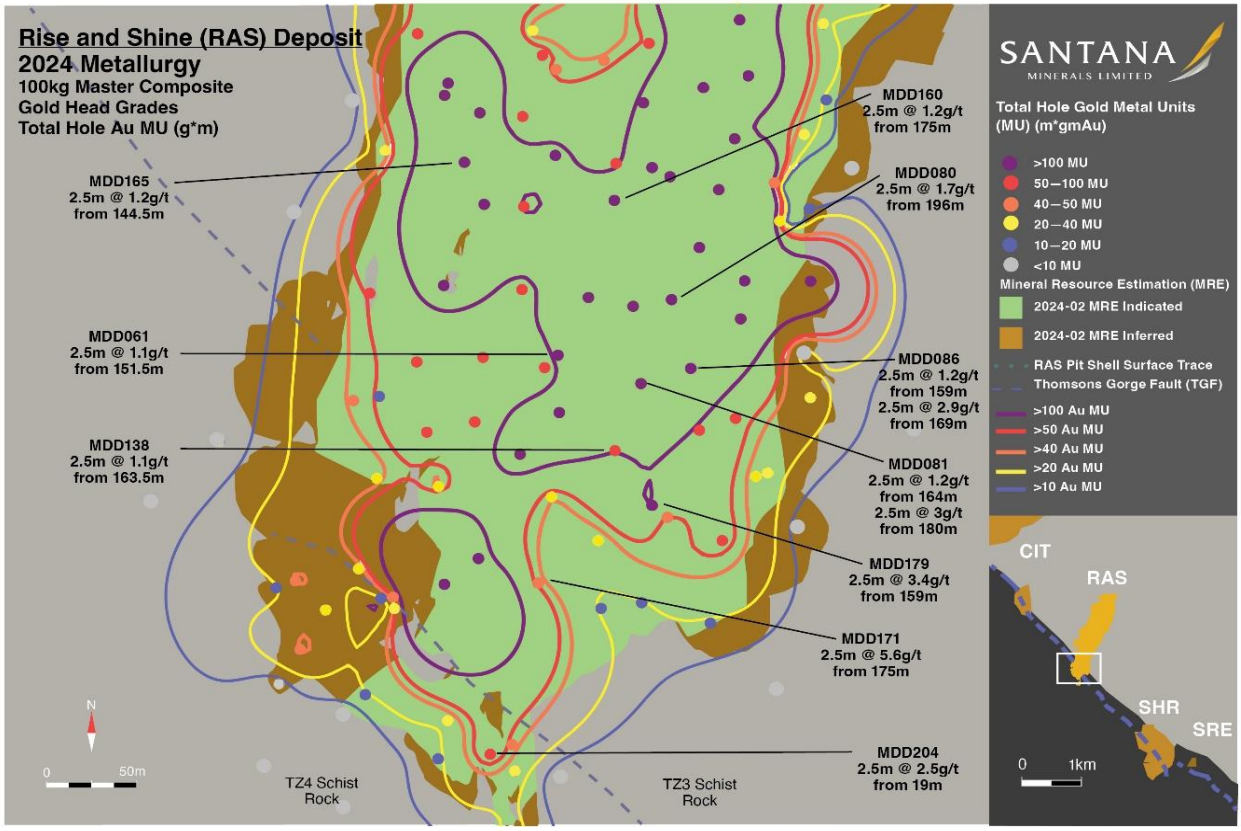

Figure 1: Plan of RAS showing locations of drill holes intervals that formed the master composite.

The composite sample parameters were set by expert consultants, Independent Metallurgical Operations Pty Ltd (IMO) in Perth, Western Australia who completed the test work programs under the guidance of expert metallurgical engineers and plant builders, MACA Interquip also of Perth.

Master and Variability Composite Analysis

The master composite sample had a weighted average original field assay value of 2.56g/t gold, comparing well to the head grade assay of 2.76g/t gold returned for the master composite taken by IMO ahead of the leach testwork (see Table 1 below for assay grade vs head grade variations of each test). Variability between the field assay and the composite assay suggest modest amounts of coarser gold are present.

Apart from an association with arsenic (at low levels of 0.033%) no other anomalous or deleterious elements were noted, of the 39 elements assayed for.

For personal use only

Comminution Test Work

A series of standard comminution tests were completed on the master composite. Variability tests for Bond Ball Work Index and SAG Mill Comminution were also completed on all 10 variability composites.

The results indicate that the ore has the following characteristics:

- An Abrasion index of 0.3077, indicating the ore exhibits moderate abrasivity.
- Crusher Work index reported an average work index value of 5.15 kWh/tonne.
- A Bond Ball Work index of 19.0 kWh/t (range 17.4 to 21.0 kWh/t categorising the ore as moderately hard.
- SAG Circuit Specific Energy values of 9.18 kWh/tonne (range 8.52 to 10.75 kWh/tonne), indicating a medium to high power input is required for grinding.

Grind/Leach Optimisation

Grind optimisation was carried out on the master composite sample at grind sizes of 150, 106 and 75 micron (µm). The deposit showed increasing recovery at finer grind sizes, with 24-hour gold recoveries of 92.6%, 93.6% and 93.7 % respectively.

A grind optimisation exercise resulted in the selection of 106 µm as the optimal grind size to maximise project economics. Results of the test work are shown below in Table 1.

Client:	Santana Minerals Limited
Project:	Bendigo-Ophir Gold Project
Client ID:	6680
Date:	22/03/2024
Sample:	Master Composite
Description:	Cyanide Leach Optimisation Tests

*Master Composite underwent gravity concentration. The gravity tailings underwent cyanide leach testing at three varied grind sizes (Lt1-LT3), followed by varied CN and O2 additions (LT4-LT5).

Composite		**Master Composite**					
Round	**#**	**Round 1 - Grind Opt**			**Round 2 - Reagent Opt**		**Round 3 - CIL**
Leach Test	**#**	**LT1**	**LT2**	**LT3**	**LT4**	**LT5**	**LT6**
Grind Size P_{80}	**µm**	**150µm**	**106µm**	**75µm**	**150µm**	**150µm**	**150µm**
CN Conc Initial/Maintained	**ppm**	**500/300**	**500/300**	**500/300**	**300/150**	**500/300**	**500/300**
DO Conc	**ppm**	**8-10**	**8-10**	**8-10**	**8-10**	**15-20**	**8-10**
Calculated Ore Head Grade	g/t	3.82	3.95	4.12	4.34	4.14	3.71
Assay Ore Head Grade	g/t	2.76	2.76	2.76	2.76	2.76	2.76
Gravity Recovery	%	64.7%	62.5%	60.6%	57.0%	59.8%	66.4%
2 Hour Leach Recovery	%	82.3%	83.6%	83.3%	76.0%	81.1%	
4 Hour Leach Recovery	%	87.7%	90.4%	90.0%	82.3%	86.3%	
8 Hour Leach Recovery	%	92.8%	94.9%	93.8%	89.4%	92.9%	
24 Hour Leach Recovery	%	92.6%	93.6%	93.7%	94.9%	90.3%	
30 Hour Leach Recovery	%	94.1%	93.5%	93.7%	89.8%	90.9%	
48 Hour Leach Recovery	%	90.9%	91.3%	91.8%	89.3%	89.5%	93.7%
Leach Residue Grade	g/t	0.35	0.34	0.34	0.47	0.44	0.23
Gravity Gold Recovery	g/t	2.47	2.47	2.49	2.47	2.47	2.46
Leach Gold Recovery	g/t	1.00	1.14	1.29	1.40	1.23	1.01
Overall Gold Recovery	g/t	3.47	3.61	3.78	3.88	3.70	3.48
48 Hour Cyanide Cons	kg/t	0.51	0.49	0.51	0.42	0.60	1.00
48 Hour Lime Cons	kg/t	0.14	0.11	0.14	0.16	0.08	0.09
Final Liquor As	mg/l	23.027	27.154	35.221			18.214
Final Liquor Fe-Sol	mg/l	9.3	12.9	16.9			8.4

Table 1. IMO test results on master composite – grind size and leach recovery

For personal use only

Of significant note is the variability between the master composite assay head grade of 2.76g/t gold and the calculated head grade in all six tests which showed assay grades have significantly under-called the calculated head grade (all between 3.71g/t and 4.34g/t gold). This has been a common outcome in most of the metallurgical leach test work completed on the RAS mineralisation to date. It is hypothesised these results are due to the coarse gold component in the deposit, as represented by the high percentage of gravity recoverable gold in the mineralisation.

The data also shows that a grind size of 106 µm appears optimal and a peak leach recovery of 94.9% was achieved after 8 hours, and reducing to 93.6% after 24 hours. This minor drop-off in recovery indicates a minor component of potential preg-robbing material occurring naturally with the mineralisation. Further work to understand this is underway using Carbon In Leach (CIL).

Reagent consumption was quite low, with test work starting with a NaCN addition of 0.93kg/t and a total consumed amount of 0.49kg/t of CN and 0.11kg/t of lime after 48 hours.

Leach tests were completed at a slurry density of 40% solids, an initial pH of 10 (maintained at 9.5-10), 500ppm of NaCN (maintained at 300ppm) with air used at a dissolved oxygen level of 8-10mg/l. All leach tests were conducted using Perth tap water.

Leach duration times and overall gold recoveries for all tests are shown below in Figure 2.

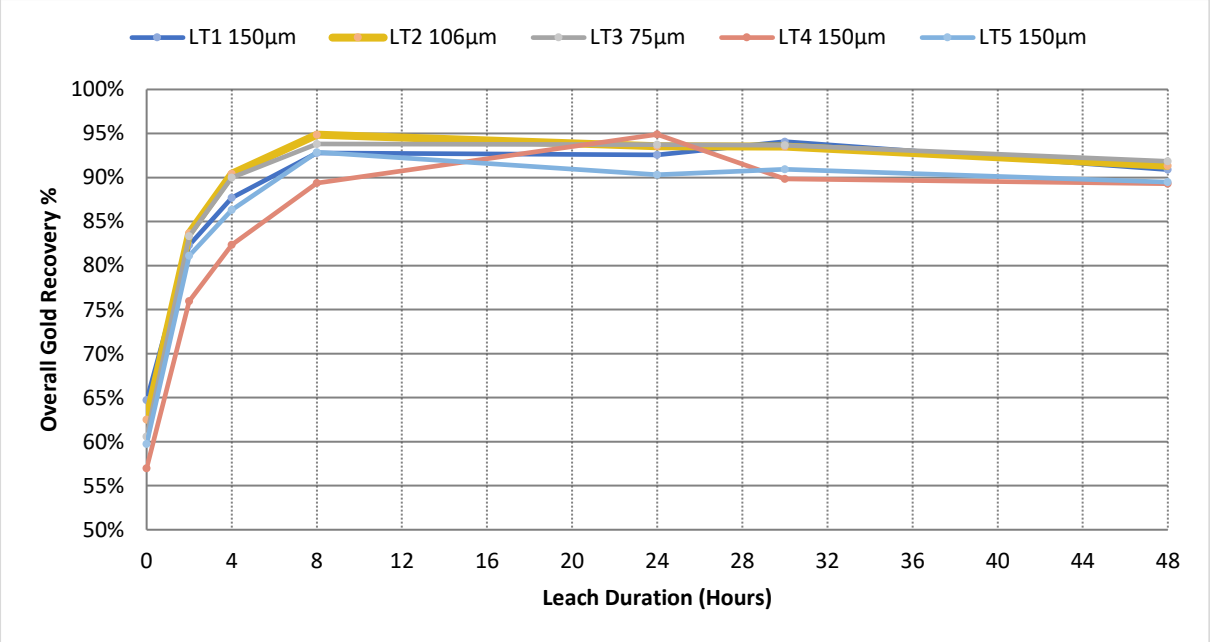

Figure 2. Master Composite Leach recovery over time (hours) for all five tests

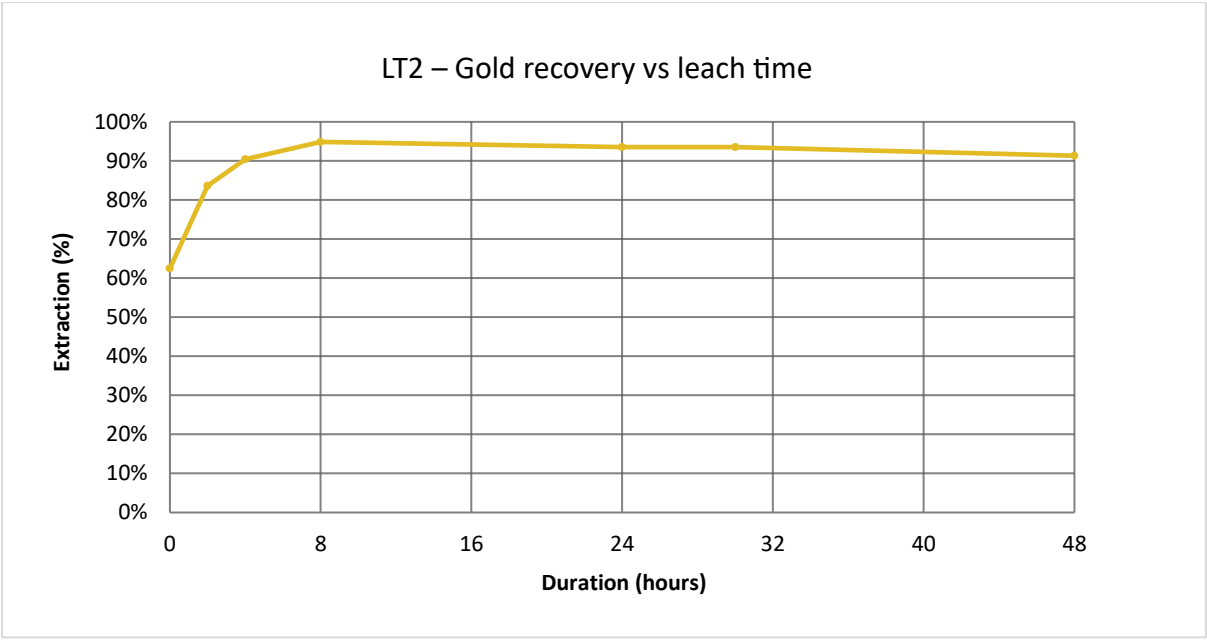

Figure 3. Leach recovery over time (hrs) for the LT2 optimal test scenario

Flotation recovery

The master composite was also subjected to a standard pyrite flotation regime to establish if a flotation concentrate could be generated. Gold recoveries of 45.6% and 52.3% were achieved in the two tests suggesting that a flotation circuit would not work effectively in the recovery process.

Further work

Further planned test work includes leach testing on the ten variability composites, cyanide destruction, tailings characterisation and solid/liquid separation.

Ends.

This announcement has been authorised for release by the Board.

Enquiries:

Damian Spring
Exec. Director & CEO
dspring@santanaminerals.com

Sam Smith
Exec. Director Corp Affairs & IR
ssmith@santanaminerals.com

For personal use only

For personal use only

Bendigo-Ophir Project Mineral Resource Estimate

The Project contains a Mineral Resource Estimate (MRE) calculated at a cutoff grade of 0.5 g/t Au with top cuts applied, as at February 2024:

Deposit	Category	tonnes (Mt)	Au grade (g/t)	Contained Gold (koz)
RAS[1]	Indicated	17.1	2.4	1,293
	Inferred	13.7	2.1	923
RAS Total	Indicated and Inferred	30.8	2.2	2,216
CIT[2]	Inferred	1.2	1.5	59
SHR[2]	Inferred	4.7	1.1	174
SRE[2]	Inferred	0.3	1.3	11
RSSZ Total	Indicated	17.1	2.4	1,293
	Inferred	21.7	1.7	1,152
RSSZ Total	**Indicated and Inferred**	38.8	2.0	2,445

Notes:

1. The Feb 2024 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". Refer to ASX announcement on 16 February 2024 for further detail.
2. 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) continue to apply and have not materially changed. Refer to ASX announcement on 28 September 2021 for further detail.

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 "Bendigo-Ophir Exploration and Project Update" dated 4 January 2024
- ASX announcement titled "High-Grade Intercepts Close out Resource Drilling at RAS" dated 24 January 2024
- ASX announcement titled "1.3m ounces upgraded to Indicated category from RAS drilling" dated 16 February 2024

Information relating to metallurgical testing associated with the Company's projects in this announcement are contained in the following ASX Announcements:

- ASX announcement titled "Metallurgical Test-work Initiated at Bendigo-Ophir Project" dated 31 March 2021
- ASX announcement titled "Drill Assays, Modelling & Metallurgy – Building the Bendigo-Ophir Gold Assets" dated 1 July 2021
- ASX announcement titled "Rise & Shine Mineralisation Extends and Metallurgy Update" dated 11 May 2022
- ASX announcement titled "New Gold Assays and Metallurgical Results from RAS" dated 24 April 2023
- ASX announcement titled "Strong RAS and Regional Drill Results" dated 23 October 2023

A copy of such announcements 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 CompetentPerson's findings are presented have not been materially modified from the original market announcements.

Current Disclosure - Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Hamish McLauchlan who is a Fellow of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr McLauchlan is a consultant and has sufficient experience 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 McLauchlan consents 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. Mr McLauchlan is eligible to participate in STI and LTI schemes in place as performance incentives for key personnel.

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 maynot 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.

For personal use only

SANTANA MINERALS LIMITED

JORC Code, 2012 Edition – Table 1

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 and diamond drilling. 'Blasthole', surface trench and underground channel samples were used as an aid for geological interpretation and domaining but not for grade estimation. Diamond drill (DD) core samples for laboratory assay are typically 1 metre samples of diamond saw cut ½ diameter core. In the rare cases where the core was friable or unconsolidated the sample was collected from one side of the core using a scoop. Where distinct mineralisation boundaries are logged, sample lengths are adjusted to the respective geological contact. RC samples were sub-sampled at 1.0 m intervals using a rotary splitter mounted below the cyclone. The splitter produced 2 x 30% splits and 1 x 40% split. The two 30% splits were used as primary sample and field duplicate (if submitted) with the 40% split used for logging and then stored at the MGL core yard. Samples are crushed at the receiving laboratory to minus 2mm (85% passing) and split using a rotary splitter to provide 1kg for pulverising in a ring mill to -75um. Pulps are fire assayed (FAA) using a 50g charge with AAS finish. Prior to 2019 only 200g of the crushed material was pulverised. 877 samples were assayed this way. Certified standards, blanks and field replicates are inserted with the original batches at a frequency of ~5% each for QAQC purposes. All pulps and crush reject (CREJ) are returned from the laboratory to MGL for storage on site. Of these returned samples, a further ~5% are re-submitted as QC check samples which involve pulp FAA re-assays by the original and an umpire laboratory and CREJ re-assayed by 500-gram (+ & -75mu) screen fire assay (SFA), 1kg BLEG (LeachWELL) and 2*500-gram Photon analysis (PHA) for gold. Where multiple assays exist for a single sample interval, larger samples are ranked in the database: PHA > BLEG > SFA > FAA. All returned pulps are analysed for a suite of 31 elements by portable XRF (pXRF). The sampling, sub-sampling and assaying methods are appropriate to the geology and mineralization of the RAS deposit. Metallurgy composite samples were selected from stored diamond saw cut ½ diameter core in continuous 2.5m lengths representing likely mining flitches. These composite samples were selected across the RAS mineralisation that is likely to be mined within the first two to three years of ore feed.

personal use only

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).*	Current drilling techniques are diamond coring (DD) PQ3 and HQ3 size triple tube. Where PQ3 core size (83mm diameter) is commenced this is maintained throughout the DD hole until drilling conditions dictate reduction in size to HQ3 core (61mm diameter). DD pre-collars are drilled open hole through un-mineralised TZ3 schist to within about 15 m of the mineralisation hangingwall at which point diamond coring commences. RC drilling is only carried out where the mineralisation target is less than about 150m downhole and used a face sample bit with sample collected in a cyclone mounted over a rotary splitter producing 2 x 30% splits and 1 x 40% split. The two 30% splits were used as primary sample and field duplicate (if submitted) with the 40% split used for logging and then stored at the MGL core yard. Drillholes are oriented to intersect known mineralised features in a nominally perpendicular orientation as much as is practicable. All drill core is oriented to assist with interpretation of mineralisation and structure using a Trucore orientation tool.
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.*	DD core sample recoveries are recorded by the drillers at the time of drilling by measuring the actual distance of the drill run against the actual core recovered. The measurements are checked by the site geologist. When poor core recoveries are recorded the site geologist and driller endeavour to immediately rectify any problems to maintain maximum core recoveries.DD core logging to date indicate ~96% recoveries. RC sample recovery is measured as sample weight recovered. RC sample moisture for all RC drilling data 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. The drilling contract used states for any given run, a level of recovery is required otherwise financial penalties are applied to the drill contractor to ensure sample recovery priority along with production performance. 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.

personal use only

Criteria	JORC Code explanation	Commentary
		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.*	All DD holes have been logged for their entire sampled length below upper open hole drilling (nominally 0-450 metres below collar). Data is recorded directly into AcQuire database with sufficient detail that supports Mineral Resource estimations (MRE). Logging is mostly qualitative but there are estimations of quartz and sulphide content and quantitative records of geological / structural unit, oxidation state and water table boundaries. Oriented DD core allows alpha / beta measurements to determine structural element detail (dip / dip direction) to supplement routine recording of lithologies / alteration / mineralisation / structure / oxidation / colour and other features for MRE reporting, geotechnical and metallurgical studies. All RC chips were sieved and logged for lithology, colour, oxidation, weathering, vein percentage and sulphide minerals. All core is photographed wet and dry before cutting. Sieved RC chips are also photographed. 100% of all relevant (within the gold grade domains) intersections were logged. The logging is of sufficient quality and detail for resource estimation.
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.*	Industry standard laboratory sample preparation methods are suitable for the mineralisation style and involve oven drying, crushing and splitting of samples to 1kg for pulverising to -75um. Pulps are fire assayed (FAA) using a 50g charge. 50g charge is considered minimum requirement for the coarse nature of the gold. Larger screen fire assays (SFA), 1kg BLEG (LeachWELL) and 2*500gm Photon Analyses (PHA) are conducted periodically as a QAQC check. Field duplicates of RC samples are sub-sampled by a splitter as described above at the time of sampling. Large diameter (83mm) PQ3 core was maintained (where conditions allow) for DD holes to MDD016 and subsequently HQ3 (61mm) for drillholes MDD017 onwards. DD core drill samples are sawn in ½ along the length of the core on cut lines marked by geologists' perpendicular to structure / foliation or to bisect vein mineralisation for

personal use only

Criteria	JORC Code explanation	Commentary
	Whether sample sizes are appropriate to the grain size of the material being sampled.	representative samples whilst preserving the orientation line. Intervals required for QAQC checks are nominated by geologists and the crushed sample being split by the laboratory with the two replicated samples then assayed. QA procedures used to maximise the representivity of sub-samples include the use of a cone splitter on the RC rig and cutting DD core perpendicular to the regional foliation. QC procedures to assess the representivity of sub-sampling include field replicates, standards, and blanks at a frequency of ~5% and also cross-lab assay checks at an umpire laboratory. The mass proportion of every 10th sample passing 75um is reported by the laboratory and monitored to ensure sample preparation quality. 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.
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.*	, SFA and PHA are all total gold assays and are appropriate to the RSSZ mineralization. DD core and RC chip samples for gold assays undergo sample preparation by SGS laboratory Westport and 50g fire assay with an AAS finish (SGS method FAA505 DDL 0.01ppm Au or FAD505 DDL 1ppm Au & FAD52V DDL 500ppm Au) by SGS laboratory Waihi. Other SGS laboratories at Macraes and Townsville and the ALS laboratory in Townsville, are used from time to time and follow the same processes. For laboratory QAQC, samples (3*certified standards, blanks and field replicates) are inserted into laboratory batches at a frequency of ~5% respectively. A selection of 5% of retained lab pulps across a range of grades are sent for re-assay and to an umpire laboratory for cross-lab check assays. Portable XRF (pXRF) instrumentation is used onsite (Olympus Innov-X Delta Professional Series model DPO-4000 equipped with a 4 W 40kV X-Ray tube) primarily to identify arsenical samples (arsenic correlates well with gold grade in these orogenic deposits). The pXRF analyses a 31-element suite (Ag, As, Bi, Ca, Cd, Cl, Co, Cr, Cu, Fe, Hg, K, Mn, Mo, Nb, Ni, P, Pb, Rb, S, Sb, Se, Sn, Sr, Th, Ti, V, W, Y, Zn, Zr) utilising 3 beam Soil mode, each beam set for 30 secs (90 secs total). pXRF QAQC checks involve regular calibration (every 20 samples) and QAQC analyses of SiO2 blank, NIST standards (NIST 2710a & NIST 2711a), & OREAS standards. pXRF QAQC checks involve regular calibration (every 20 samples) and QAQC analyses of SiO2 blank, NIST standards (NIST 2710a & NIST 2711a), & OREAS standards.

personal use only

No geophysical tools have been used in this MRE.

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 gold assays and pXRF arsenic analyses are checked by alternative senior company personnel. Original lab assays are initially reported and where replicate assays and other QAQC work require re-assay or screen fire assays, the larger sample results are adopted. To date results are accurate and fit well with the mineralisation model. Twinned data is available where DD core holes have been sited adjacent to previous RC drillholes and where DD redrills have occurred. pXRF multi-element analyses are directly downloaded from the pXRF analyser as csv electronic files. These and laboratory assay csv files are imported into the database, appended and merged with previous data. 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 AcQuire database is stored on a cloud server and is regularly backed up, updated and verified by an independent qualified person. 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.

For personal use only

Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	All drillhole collar locations are accurate (+/- 50mm) xyz coordinates when captured by an experienced surveyor using RTK-GPS equipment. All drill holes reference the NZGD2000 NZTM map projection and collar RLs the NZVD2016 vertical datum. DD down hole surveys are recorded continuously with a Precision Mining and Drilling "North-seeking" Gyro downhole survey tool. RC holes are surveyed at 12m intervals using a Reflex multi-shot camera. 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. 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 collar site locations in steep terrain are dictated by best access allowed by contour tracks with gradients to allow safe working access and drill pad excavations. Drillhole designs take into account this variation to achieve evenly spaced intercepts at the hangingwall of the mineralisation. Drillhole intersection spacing on the hangingwall of the mineralisation is typically 30 m (EW) by 30 m (NS) but varies from 20 m (EW) by 20 m (NS) in closely spaced areas to 120 m (EW) by 100 m (NS) in widely spaced (inferred) areas. This spacing is considered appropriate for determination of geological and grade continuity at the mineral resource categories 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. Sampling and assaying are in one metre intervals or truncated to logged features.

personal use only

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.*	Drillholes are oriented to intersect known mineralised features in a nominally perpendicular orientation as much as is practicable. True widths are estimated perpendicular to mineralisation boundaries where these limits are known. As the deposits are tabular and lie at low angles, there is not anticipated to be any introduced bias for resource estimates.
Sample security	*The measures taken to ensure sample security.*	Company personnel manage the chain of custody from sampling site to laboratory. DD drill core samples are transported daily from DD rig by the drilling contractor in numbered core boxes to the Company secure storage facility for logging and sample preparation. After core cutting, the core for assay is bagged, securely tied, and weighed before being placed in polyweave bags which are securely tied. Retained core is stored on racks in secure locked containers. RC samples are also place in polyweave bags and secured with zip ties. Polyweave bags with the calico bagged samples for assay are placed in plastic cage pallets, sealed with a wire-tied cover, photographed, and transported to local freight distributer for delivery to the laboratory. On arrival at the laboratory photographs taken of the consignment are checked against despatch condition to ensure no tampering has occurred.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An independent Competent Person (CP) conducted a site audit in January 2021 and December 2022 of all sampling techniques and data management. No major issues were identified, and recommendations have been followed. In February 2023 Snowdon Optiro completed a desktop review of the assay methods and QC sample results and in its report concluded that the sampling and assaying methods are in line with standard industry procedures and that that the assay data in the supplied database is suitable to be used as the basis for a Mineral Resource.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and	• *Type, reference name/number, location and*	Exploration is being currently conducted within Mineral Exploration Permit (MEP) 60311 (252km²)

personal use only

Criteria	JORC Code explanation	Commentary
land tenure status	*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.*	registered to Matakanui Gold Ltd (MGL) issued on 13th April 2018 for 5 years. In 2023 the term of this permit was extended for a further 5 years until 12 April 2028. There are no material issues with third parties. MGL was granted Minerals Prospecting Permit (MPP) 60882 (40km²) on 30 Nov 2023 for a term of 2 years. The tenure of the Permits is secure and there are no known impediments to obtaining a licence to operate. As gold is a Crown mineral, a royalty is payable to the Crown as either the higher of an ad valorem royalty of 2% of the net sales revenue or an accounting profits royalty of 10%. The Project is subject to a 1.5% Net Smelter Royalty (NSR) on all production from MEP 60311 (and successor permits) payable to an incorporated, private company (Rise and Shine Holdings Limited) which is owned by the prior shareholders of MGL (NSRW Agreement) before acquisition of 100% of MGL shares by Santana Minerals Limited. Access arrangements are in place with landowners that provide for current exploration and other activities, and any future decision to mine. As such, compensation is payable, including payments of up to $1.5M on a decision to mine, plus total royalties starting at 1% on the net value of gold produced, increasing to 1.5% and ultimately 2% dependent on location and total gold produced over the life of the mine. The royalties are also subject to pre-payment of up to $3M upon commencement of mining operations.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Early exploration in the late 1800's and early 1900's included small pits, adits and cross-cuts and alluvial mining. Exploration has included soil and rock chip sampling by numerous companies since 1983 with drilling starting in 1986. Exploration in the 1990's commenced with a search for Macraes style gold deposits along the RSSZ. Drilling included 13 RC holes by Homestake NZ Exploration Ltd in 1986, 20 RC holes by BHP Gold Mines NZ Ltd in 1988 (10 of these holes were in the Bendigo Reefs area which is not part of the MRE area), 5 RC holes by Macraes Mining Company Ltd in 1991, 22 shallow (probably blasthole) holes by Aurum Reef Resources (NZ) Ltd in 1996, 30 RC holes by CanAlaska Ventures Ltd from 2005-2007, 35 RC holes by MGL in 2018 and a further 18

personal use only

Criteria	JORC Code explanation	Commentary
		RC holes by MGL in 2019.
Geology	• *Deposit type, geological setting and style of mineralisation.*	The RSSZ is a low-angle late-metamorphic shear-zone, presently known to be up to 120m thick. It is sub-parallel to the metamorphic foliation and dips gently to the north- east. It occurs within psammitic, pelitic and meta-volcanic rocks. The hangingwall of the RSSZ is truncated by the post metamorphic and post mineralisation Thomsons Gorge Fault (TGF). The TGF is a regional low-angle fault that separates upper barren chlorite (TZ3) schist from underlying mineralised biotite (TZ4) schists. Gold mineralisation is occurs in the RSSZ as 4 known deposits with Mineral Resource Estimates (MRE) – Come-in-Time (CIT), Rise and Shine (RAS), Shreks (SHR) and Shreks-East (SRE). The gold and associated pyrite/arsenopyrite mineralisation at all deposits occur along micro-shears, and in brecciated / laminar quartz veinlets within the highly- sheared schist. There are several controls on mineralisation with apparent NNW, N and NNE trending structures all influencing gold distribution. Shear dominated mineralisation within the top 20-40m of the shear zone immediately below the Thomsons Gorge Fault (TGF). Stacked stockwork vein swarms (SVS) occur deeper in the RSSZ. Unlike Macraes, the gold mineralisation in the oxide, transition and fresh zones is characterised by coarse free gold.
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*	Refer to the body of text. No material information has been excluded.

personal use only

Criteria	JORC Code explanation	Commentary
	○ *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.*	
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.*	Significant gold intercepts are reported using 0.25g/t Au and 0.50g/t Au lower grade cut-offs with a maximum of 4m of internal dilution included. Broad zonation is: 0.10g/t Au cut-off defines the wider low-grade halo of mineralisation, 0.25g/t Au cut-off represents possible economic mineralisation, with 0.50g/t Au defining high-grade axes / envelopes. 1.50g/t Au cut-off is possible economically underground exploitable Metal unit (MU) distribution, where shown on maps and in tables are calculated from total drill hole Au * associated drill hole interval metres. pXRF analytical results reported for laboratory pulp returns are considered accurate for the suite of elements analysed.

personal use only

Criteria	JORC Code explanation	Commentary
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').*	All intercepts quoted are downhole widths. True widths are estimated perpendicular to mineralisation boundaries where these limits are known. Intercepts are associated with a major 20-120m thick low-angle mineralised shear that is largely perpendicular to the drillhole traces. Aggregate widths of mineralisation reported up until 2nd June 2023 are drillhole intervals >0.50g/t Au occurring in apparent low angle stacked zones. Subsequent reporting is on a continuous basis. There are steeply dipping narrow (1-5m) structures deeper in the footwall and the appropriateness of the current drillhole orientation will become evident and modified as additional drill results dictate.
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.*	All significant intercepts have been reported.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All significant intercepts have been reported.
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;*	Not applicable; meaningful and material results are reported in the body of the text.

personal use only

Criteria	JORC Code explanation	Commentary
	potential deleterious or contaminating substances.	
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.*	DD infill drilling of existing inferred resources is continuing at RAS on 60*40m metre spacing and deeper sub-vertical structures. A review of field mapping, soil sampling and geophysical surveys is in progress to determine new targets for drilling in the project area. Concurrent to the planned drilling outlined above, additional metallurgical test work, environmental, geotechnical and hydrological investigations are on-going to allow scoping and pre-feasibility studies into a gold mining and processing operation.

personal use only