

## HIGH-GRADE GOLD MINERALISATION EXTENDED IN DRILLHOLE MDD014

- Full assay results from drillhole MDD014 double the previously announced 21.7 metres at 5.7g/t Au to an aggregate 50.7 metres @ 3.10 g/t Au between 174.3 and 230 metres with:
  - 33.7 metres @ 4.35 g/t of gold from 174.3 metres including:
    - 5.7 metres @ 11.19 g/t Au from 174.3 metres
    - 4.0 metres @ 12.60 g/t Au from 187.0 metres
    - 14.0 metres @ 2.13 g/t Au from 193.0 metres
  - 17.0 metres @ 0.62 g/t of gold from 213 metres
- This has confirmed extension of high-grade gold mineralisation down plunge at Rise and Shine (RAS) deposit and beyond the recently revised Mineral Resource Estimate (MRE).
- Additional drilling has been completed on two further drill sections to >240 metres north of the RAS MRE halos and visible gold has been logged in 3 of 5 completed drillholes.
- Diamond drilling (DD) is continuing northwards to fast-track definition of additional gold resources with focus on down-plunge extensions at RAS and Come-in-Time (CIT) deposits.

**15 November 2021** Santana Minerals Limited (ASX: SMI) ("Santana" or "the Company") is pleased to announce further significant assay results from the 100% owned Bendigo-Ophir Project ("the Project") where drilling since November 2020 has increased Inferred Gold Resources to 643Koz at four Rise and Shine Shear Zone (RSSZ) Deposits (ASX announcement on 28<sup>th</sup> September 2021).

Significant high-grade mineralisation in the top of diamond (DD) drillhole MDD014 at RAS (ASX announcement on 23<sup>rd</sup> September 2021) and similar results in adjacent drillhole MDD013 (ASX announcement on 27<sup>th</sup> October 2021) are reinforced by these new MDD014 assay results at the northern extent of the new RAS MRE of 287Koz @ 1.40g/t Au (>0.25g/t Au, uncut).

Commenting on the results Executive Director Dick Keevers said:

*"Assays for the lower part of diamond drill hole MDD014 have extended the high-grade zone to 33.7m @ 4.35 g/t Au, an excellent result, particularly because this drill hole is located further north and down plunge, so outside of the most recent MRE. Wherever our drilling demonstrates that this new gold mineralisation continues down plunge, especially with repeated high-grade zones, we continue to add to the MRE potential and expand our options for possible future mining studies"*

## RAS drillhole MDD014 – Full Results

Diamond (DD) drillhole MDD014 (Table 1, Figures 1, 2, 3 & 4) is on the high-grade projection of the RAS shoot, one of four deposits along the Rise and Shine Shear Zone (RSSZ) where drilling is focusing on extensions to the newly upgraded MRE (ASX announcement on 28<sup>th</sup> September 2021).

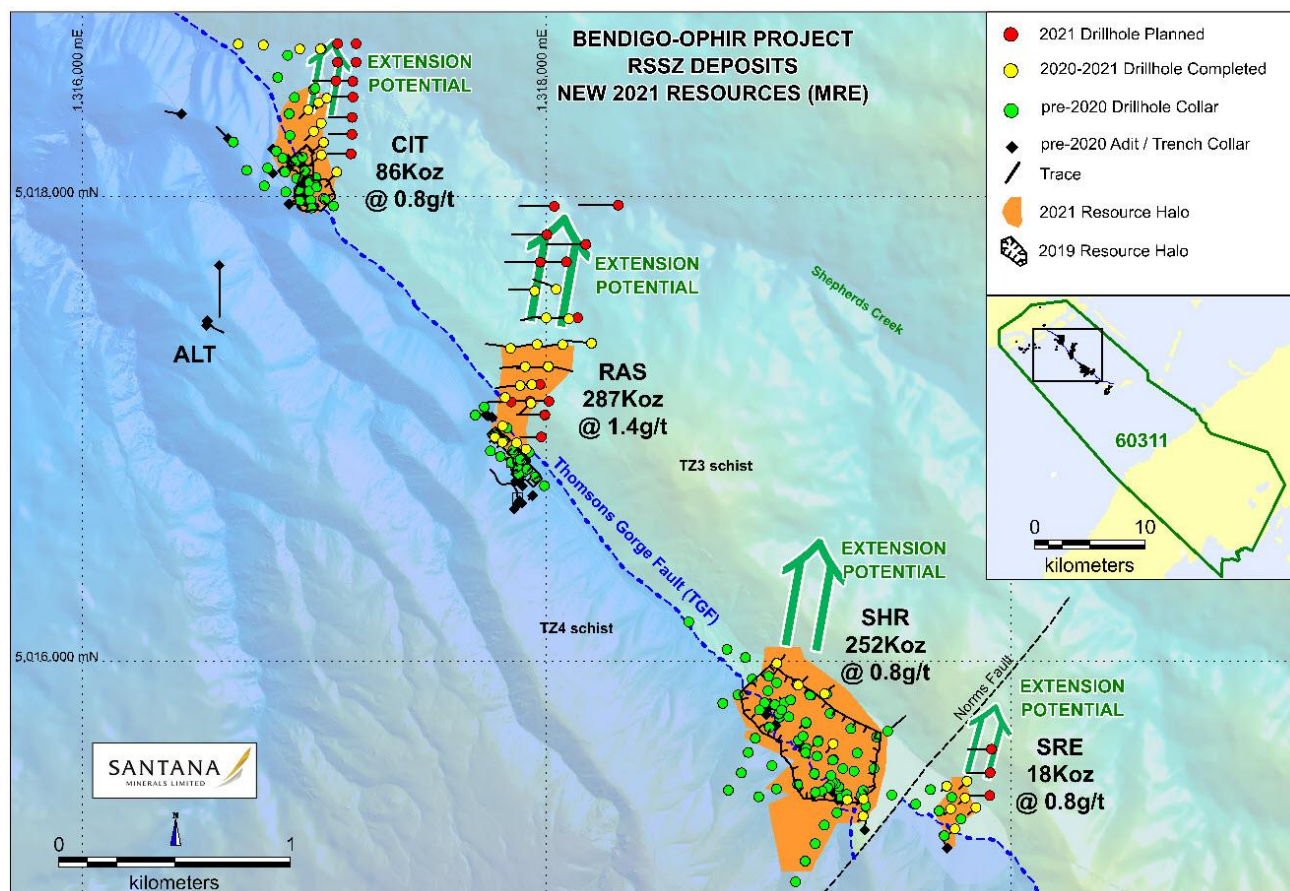


Figure 1 RSSZ 2021 Deposits & Resource Halos

Table 1: MDD014 co-ordinates and downhole survey detail

Hole ID	East (NZTM)	North (NZTM)	RL (m)	Azimuth (T Avg)	Dip (Avg)	Length (m)	Method	Status
MDD014	1318070	5017364	690.2	262.7	-68	331.0	DD	Completed

Full results have now been received for MDD014 where previously 21.7 metres @ 5.68 g/t Au of high-grade mineralisation from the top of the RSSZ was reported (ASX announcement on 23<sup>rd</sup> September 2021).

MDD014 assays (Appendix 1) show strong mineralisation extending in two intervals (Figures 3 & 4) over an aggregate thickness of 50.7 metres @ 3.10 g/t between 174.3 and 230.0 metres (Figure 3):

- **33.7 metres @ 4.35 g/t of gold from 174.3 metres including:**
  - 5.7 metres @ 11.19 g/t Au from 174.3 metres
  - 4.0 metres @ 12.60 g/t Au from 187.0 metres
  - 14.0 metres @ 2.13 g/t Au from 194.0 metres
- **17.0 metres @ 0.62 g/t of gold from 213.0 metres**

A broad 100-metre-thick lower grade envelope averaging 0.10 g/t Au extends from 230 metres to the end of hole.

## RAS drillhole MDD014 – Implications for additional resources

Drillhole MDD014 and adjacent hole MDD013 lie north of the newly defined RAS MRE inferred resource halo (Figure 2). Their respective aggregate thicknesses and grades of 50.7m @ 3.10g/t Au and 42.7m @ 1.77 g/t Au exceed the average 1.40 g/t Au grade of the 287Koz RAS gold resource. The east-west drill section N5017360 has a NS envelope of influence of 120 metres (60 metres north of the existing MRE and 60 metres south into the resource halo) where high grades and widths have positive implications for the next MRE upgrade.

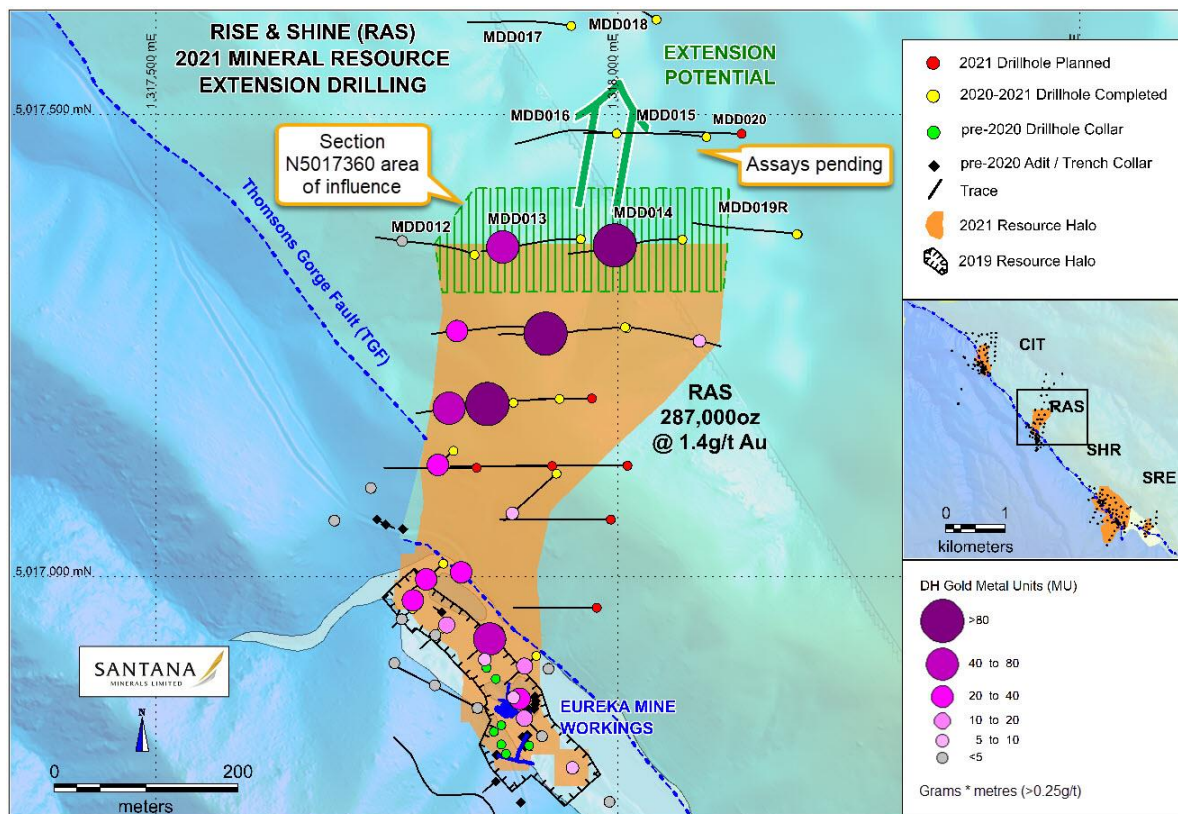


Figure 2 RAS MDD014 location, Section Influence & Gold Metal Units

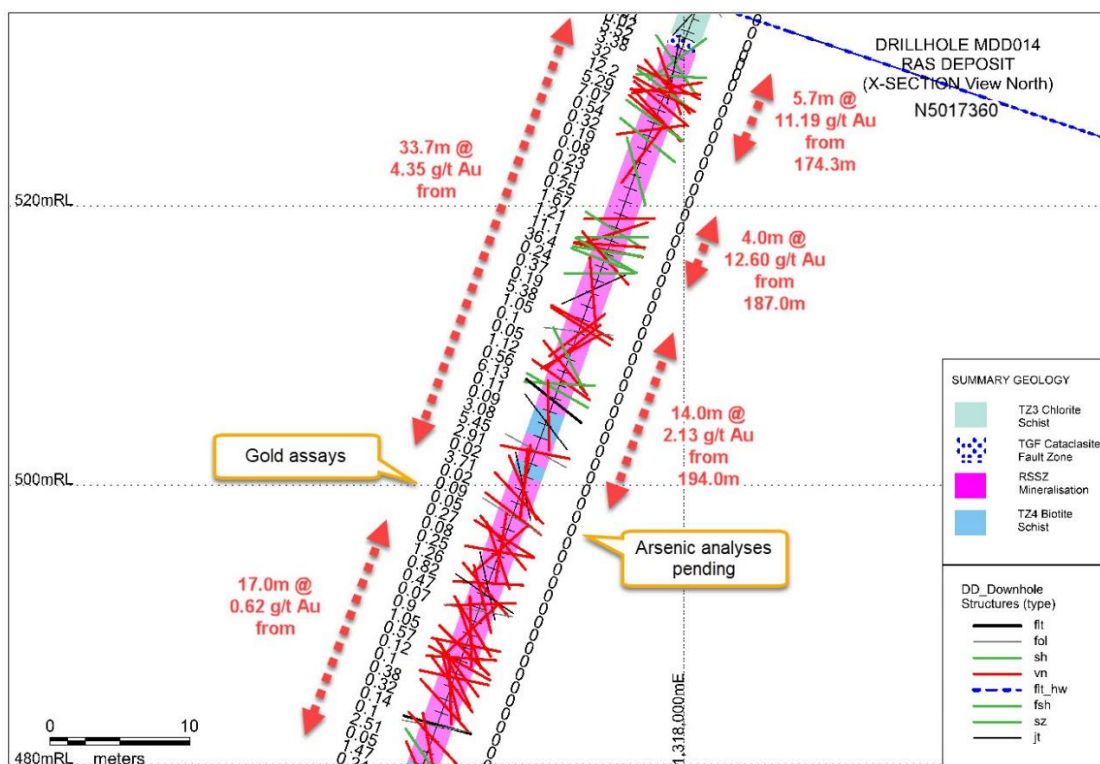


Figure 3 RAS MDD014 Drillhole – gold mineralisation & structures



Higher gold grade intervals are associated with quartz-arsenopyrite (Qv-asy) stockwork veins (Figures 3 & 4).

MDD014 gold metal units (grams\* metres >0.25g/t) (Table 2) are the highest in the project area to date and at RAS occur north-east of an alignment of high MU in drillholes to the south-west (Figure 2).

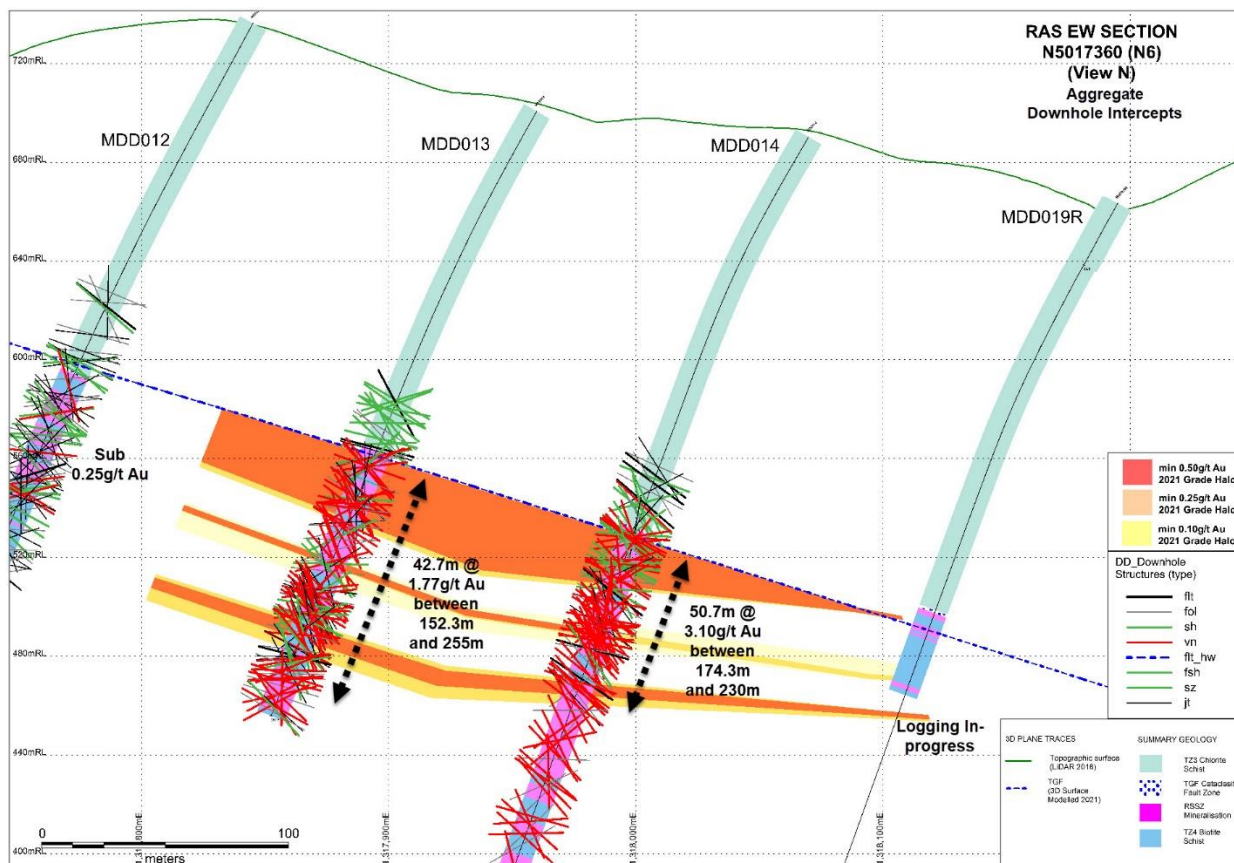


Figure 4 RAS MDD014 X-Section N5017360 – mineralisation & structures

Table 2: RAS North drillhole aggregate gold and Metal Units

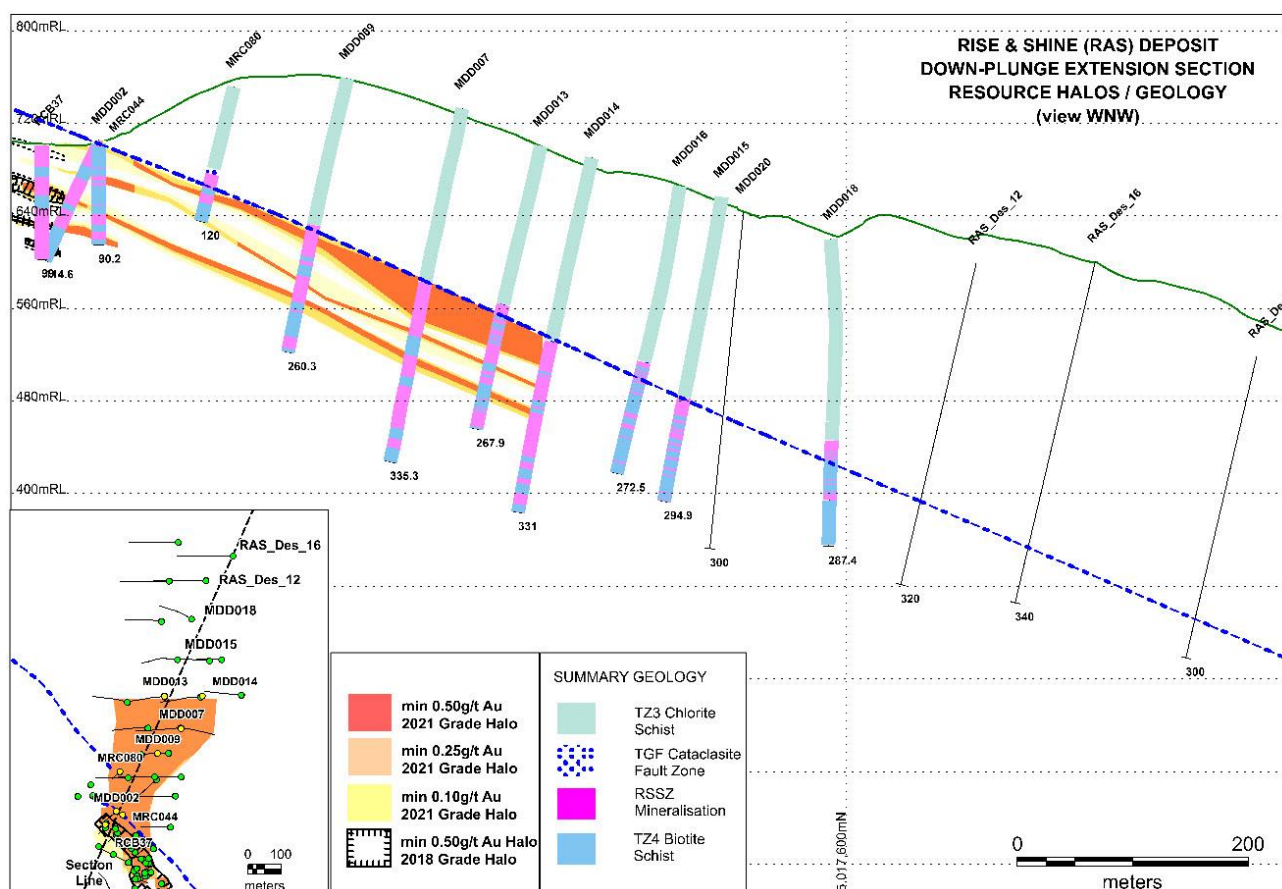
Section Northing	Down-Plunge Influence (m)	Hole ID	DH From (m)	DH Length (m)	DH Grade (g/t)	MU (m*g/t Au)	
N5017480	120	MDD016	169.0	VG in 4 (1m) intervals			* final assays late Nov
Aggregate	120	MDD016		assays pending			
N5017480	120	MDD015	194.8	VG in 8 (1m) intervals			* final assays late Nov
Aggregate	120	MDD015		assays pending			
N5017360	120	MDD014	174.3	33.7	4.35	147	* previously 21.7m @ 6.85g/t
			213.0	17	0.62	11	
Aggregate	120	MDD014		50.7	3.10	157	
N5017360	120	MDD013	152.3	6.7	1.59	11	
			173.0	6	0.48	3	
			183.0	9	4.40	40	*incl 1m @ 33.00g/t from 189m
			196.0	11	1.14	13	
			219.0	3	0.55	2	
			248.0	7	1.20	8	*incl 1m @ 7.26g/t from 252m
Aggregate	120	MDD013		42.7	1.77	76	
N5017360	120	MDD012	sub-0.25g/t Au				* west of mineralised halo
Aggregate	120	MDD012		0.0	0.00	0	
N5017240	90	MDD011	147.0	10.0	1.84	18	*incl 1m @ 9.24g/t from 155m
			169.0	5.0	0.45	2	
			210.0	3.0	2.05	6	
Aggregate	90	MDD011		18.0	1.49	27	

### RAS north beyond existing Resources - Ongoing extension drilling

Drilling covering the down-plunge extension >240 metres beyond the RAS resource halo (Figures 2 & 5) has been accelerated from early October with double-shifting, seven days a week. Six holes (1,569 metres) have been completed in the past month with one in-progress (Table 3). Assay results are pending for all these holes.

**Table 3: MDD015 to MDD020 co-ordinates and downhole survey detail**

Hole ID	East (NZTM)	North (NZTM)	RL (m)	Azimuth (T Avg)	Dip (Avg)	Length (m)	Method	Status
MDD015	1318096	5017475	656.5	271.9	-63	294.9	DD	Completed
MDD016	1317999	5017479	666.0	263.6	-66	271.0	DD	Completed
MDD017	1317950	5017596	650.5	271.5	-66	280.0	DD	Completed
MDD018	1318042	5017603	620.0	292.4	-68	287.4	DD	Completed
MDD019	1318195	5017370	663.3	277.5	-61	28.5	DD	Caved
MDD019R	1318194	5017370	663.3	276.4	-68	300.0	DD	Completed
MDD020	1318134	5017479	642.5	275.0	-60	300.0	DD	In-Progress



**Figure 5 RAS Down-plunge shoot axis section (geology & structures)**

Coarse visible gold (VG) has been logged in three of the six of the drillholes (MDD015, MDD016, and MDD019R) over a broad area north of RAS MRE halo (Appendix 2) with MDD020 (in TZ3) yet to intersect the target RSSZ mineralisation.

- MDD015 - 8 intervals of VG between 199 and 234 metres (ASX announcement on 27<sup>th</sup> October 2021)
- MDD016 – 4 intervals of VG between 177 and 217 metres (Figure 6)
- MDD019R – 3 intervals of VG between 221 and 254 metres (logging in-progress), (Figure 7)

With the VG appearance in wide (100-metre) spaced drillholes 120 metres north of existing RAS resources there is cautious anticipation that these may translate into meaningful gold grades as returned in holes to the south.





Figure 6 RAS drillhole MDD016 – Visible gold @ 199 metres



Figure 7 RAS drillhole MDD019R – Visible gold @ 253.5 metres

## **Key Conclusions**

Results from MDD014 averaging 3.10 g/t Au over a wide (50.7 m) thickness, with individual metre grades to 36.40 g/t Au, have added to the impressive sets of results from RAS since drilling first identified the northerly shallow plunging mineralised shoot in February.

With the continuity and robustness of the gold mineralisation now further extended by MDD014 assays, visible gold logged in new drillholes and consistency of quartz-arsenopyrite stockwork vein sets throughout and north of the 2021 RAS MRE reinforce the view of an emerging new major mineralised system.

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

For further information, please contact:

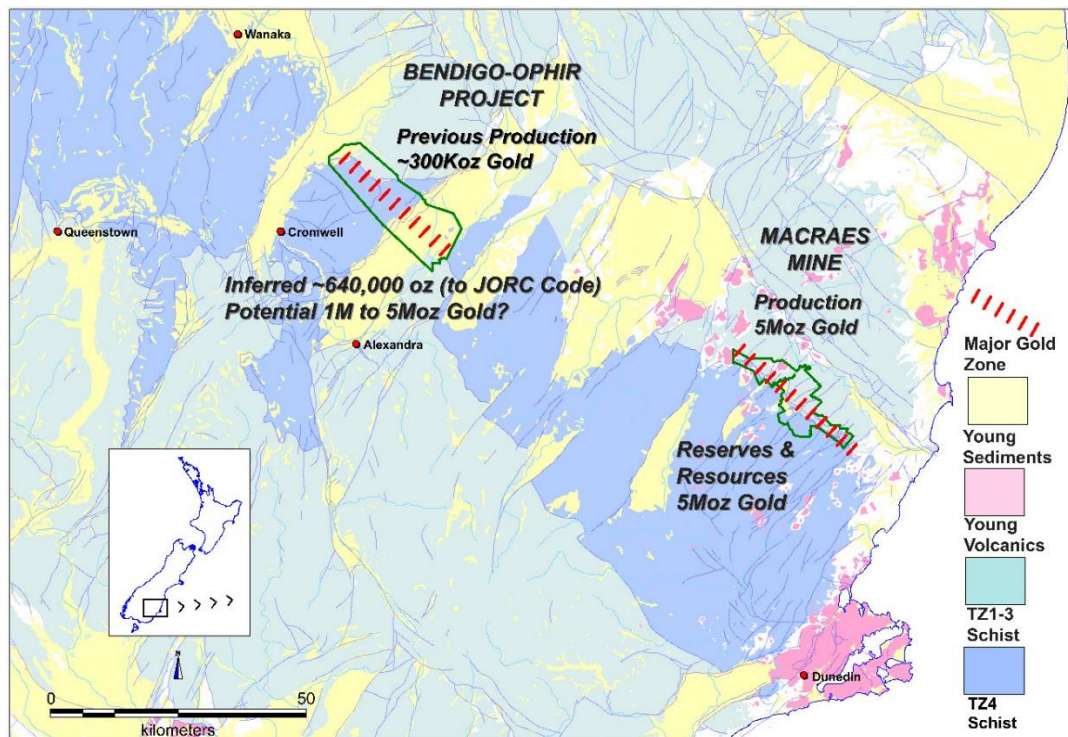
Richard Keevers  
Executive Director  
+61 408 873 353  
[rkeevers@westnet.com.au](mailto:rkeevers@westnet.com.au)

Cameron Peacock  
Investor Relations & Business Development  
+61 439 908 732  
[cpeacock@santanaminerals.com](mailto:cpeacock@santanaminerals.com)

### 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 Project is located ~90 kilometres northwest of Oceana Gold Ltd (OGC) Macraes Gold Mine (Figure 8).

The Project contains a new Inferred Mineral Resource Estimate (MRE) of 643K ounces of gold @ 1.0g/t (0.25 g/t Au lower cut-off grade, no top-cut), an estimate based on drill results to June 2021 and reported in September 2021 which the Company interprets has the potential to be further expanded and developed into a low cost per ounce heap leach operation, with ore from bulk tonnage open pits.



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

The Bendigo-Ophir resources occur in 4 deposits (Figure 1) that are inferred to extend in a northerly direction within the RSSZ which hosts gold mineralization over a recognised strike length of >20km.

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 mineralization (HWS) 10-40 metres in width above quartz vein and stockwork related gold mineralization extending >120 metres below the HWS which is largely untested down-plunge and at depth.

The Company embarked on diamond drilling (DD) and reverse circulation (RC) drilling programmes in November 2020 with the immediate objective to increase the existing resources by drill testing the down plunge extensions of known mineralisation. The Company is focusing on advanced precious metals opportunities in New Zealand and Mexico.



#### **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 "Significant Gold Intercept at Rise and Shine Deposit" dated 23 September 2021
- ASX announcement titled "Gold Resources Increased 155% to 643Koz" dated 28 September 2021
- ASX announcement titled "Further wide mineralised intercepts and coarse free gold" dated 27 October 2021

A copy of such announcement is available to view on the Santana Minerals Limited website [www.santanaminerals.com](http://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.

#### **Current Disclosure - Competent Persons Statement**

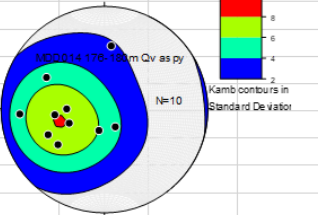
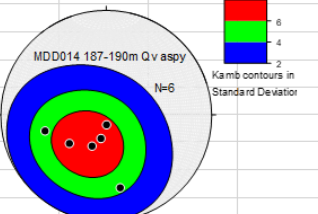
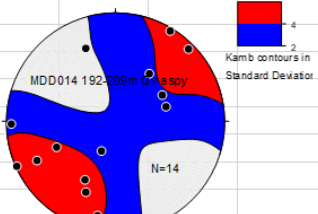
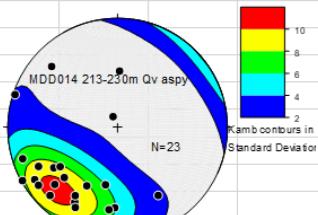
The information in this report that relates to Exploration Results is based on information compiled by Mr Richard Keevers, a Competent Person who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Keevers is a Director of Santana Minerals Limited and has sufficient experience which 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 Keevers consents to the inclusion in this report of the matters based on his 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.

#### **Forward Looking Statements**

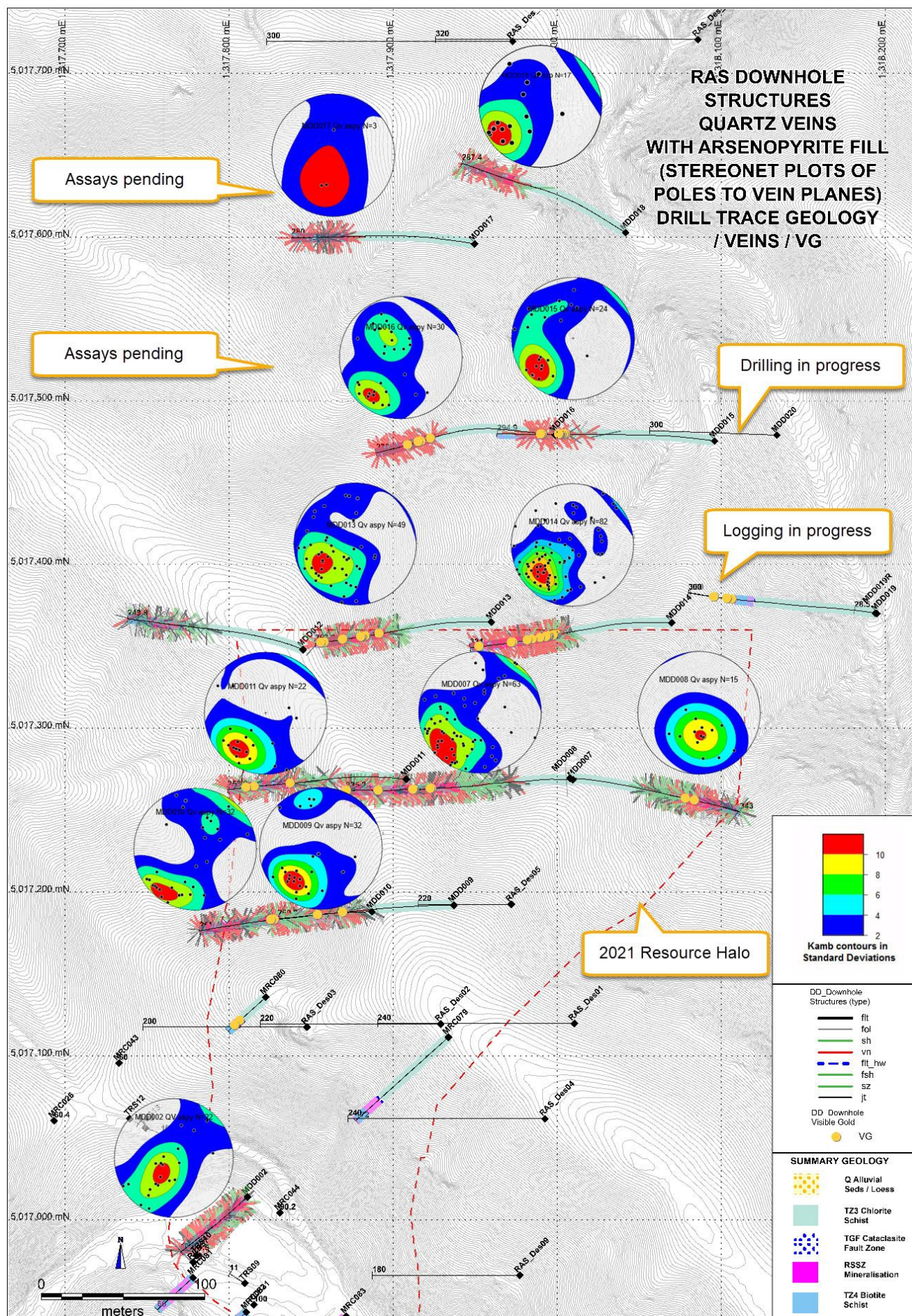
Forward-looking statements in this announcement include, but are not limited to, statements with respect to Santana's plans, strategy, activities, events or developments the Company believes, expects or anticipates will or may occur. By their very nature, forward-looking statements require Santana to 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.

**Appendix 1 RAS MDD014 Mineralised Intercept – Assay results, quartz-arsenopyrite veins, geology**

hole_no	from m	to m	interval m	sample id	Au g/t	Comp metres min025	Comp Au min025 g/t	Comp metres min1.00	Comp Au min1.00 g/t	Qv aspy stereonet poles to veins	Geol_unit
MDD014	173.0	173.5	0.5	MG10263	0.01						TZ3
MDD014	173.5	174.3	0.8	MG10264	0.02						TGF
MDD014	174.3	175.0	0.7	MG10265	5.52						
MDD014	175.0	176.0	1.0	MG10266	3.38						
MDD014	176.0	177.0	1.0	MG10267	32.00			5.7	11.19		
MDD014	177.0	178.0	1.0	MG10269	12.20						
MDD014	178.0	179.0	1.0	MG10270	5.29						
MDD014	179.0	180.0	1.0	MG10271	7.07						
MDD014	180.0	181.0	1.0	MG10272	0.54						
MDD014	181.0	182.0	1.0	MG10273	0.32						
MDD014	182.0	183.0	1.0	MG10274	0.19						
MDD014	183.0	184.0	1.0	MG10275	0.08						
MDD014	184.0	185.0	1.0	MG10276	0.23						
MDD014	185.0	186.0	1.0	MG10279	0.21						
MDD014	186.0	187.0	1.0	MG10280	0.25						
MDD014	187.0	188.0	1.0	MG10281	1.67			4.0	12.60		
MDD014	188.0	189.0	1.0	MG10282	1.21						
MDD014	189.0	190.0	1.0	MG10283	11.10						
MDD014	190.0	191.0	1.0	MG10284	36.40						
MDD014	191.0	192.0	1.0	MG10285	0.24						
MDD014	192.0	193.0	1.0	MG10286	0.37						
MDD014	193.0	194.0	1.0	MG10288	0.19						
MDD014	194.0	195.0	1.0	MG10289	5.38						
MDD014	195.0	196.0	1.0	MG10290	1.05						
MDD014	196.0	197.0	1.0	MG10291	0.10						
MDD014	197.0	198.0	1.0	MG10292	0.05						
MDD014	198.0	199.0	1.0	MG10293	1.12						
MDD014	199.0	200.0	1.0	MG10294	0.56						
MDD014	200.0	201.0	1.0	MG10295	6.13			14.0	2.13		
MDD014	201.0	202.0	1.0	MG10296	0.11						
MDD014	202.0	203.0	1.0	MG10299	0.09						
MDD014	203.0	204.0	1.0	MG10300	3.08						
MDD014	204.0	205.0	1.0	MG10301	5.45						
MDD014	205.0	206.0	1.0	MG10302	2.91						
MDD014	206.0	207.0	1.0	MG10303	0.02						
MDD014	207.0	208.0	1.0	MG10304	3.71						
MDD014	208.0	209.0	1.0	MG10305	0.02						
MDD014	209.0	210.0	1.0	MG10306	0.09						
MDD014	210.0	211.0	1.0	MG10308	0.05						
MDD014	211.0	212.0	1.0	MG10309	0.27						
MDD014	212.0	213.0	1.0	MG10310	0.08						
MDD014	213.0	214.0	1.0	MG10311	0.25						
MDD014	214.0	215.0	1.0	MG10312	1.26						
MDD014	215.0	216.0	1.0	MG10313	0.82						
MDD014	216.0	217.0	1.0	MG10314	0.47						
MDD014	217.0	218.0	1.0	MG10315	0.07						
MDD014	218.0	219.0	1.0	MG10316	0.90						
MDD014	219.0	220.0	1.0	MG10319	1.05						
MDD014	220.0	221.0	1.0	MG10320	0.57						
MDD014	221.0	222.0	1.0	MG10321	0.12			17.0	0.62		
MDD014	222.0	223.0	1.0	MG10322	0.10						
MDD014	223.0	224.0	1.0	MG10323	0.38						
MDD014	224.0	225.0	1.0	MG10324	0.32						
MDD014	225.0	226.0	1.0	MG10325	0.14						
MDD014	226.0	227.0	1.0	MG10326	0.10						
MDD014	227.0	228.0	1.0	MG10328	2.51						
MDD014	228.0	229.0	1.0	MG10329	0.05						
MDD014	229.0	230.0	1.0	MG10330	1.47						



**Appendix 2 RAS Deposit – Mineralised quartz-arsenopyrite stockwork vein distribution / structures**





**JORC Code, 2012 Edition – Table 1**

**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<b><i>Sampling techniques</i></b>	<p><i>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.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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.</i></p>	<p>Diamond drill (DD) core samples for laboratory assay are typically 1 metre samples of diamond saw cut ½ diameter core. Where distinct mineralisation boundaries are logged, sample lengths are adjusted to the respective geological contact.</p> <p>Samples are crushed at the receiving laboratory to minus 2mm (80% passing) and split to provide 1kg for pulverising to -75um. Pulps are fire assayed using a 50g charge.</p>

Criteria	JORC Code explanation	Commentary
<b><i>Drilling techniques</i></b>	<i>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).</i>	<p>Current drilling techniques are diamond core (DD) PQ3 and HQ3 size triple tube. PQ3 core size (83mm diameter) is maintained throughout the DD hole until drilling conditions dictate reduction in size to HQ.</p> <p>Drillholes are oriented to intersect known mineralised features in a nominally perpendicular orientation as much as is practicable.</p> <p>All drill core is oriented to assist with interpretation of mineralisation and structure using a Trucore orientation tool.</p>
<b><i>Drill sample recovery</i></b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>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.</i></p>	<p>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.</p> <p>When poor core recoveries are recorded the site geologist and driller endeavour to immediately rectify any problems to maintain maximum core recoveries.</p> <p>DD core logging to date indicate &gt;97% recoveries.</p> <p>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.</p>

Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<p><i>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.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>All DD holes have been logged for their entire sampled length below upper open hole drilling (nominally 0-140 metres below collar). Data is transcribed from paper logs into spreadsheets and then imported into an Access database with sufficient detail that supports Mineral Resource estimations (MRE).</p> <p>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.</p> <p>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.</p> <p>All core is photographed wet and dry before cutting.</p>
<b>Sub-sampling techniques and sample preparation</b>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>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.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>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 using a 50g charge.</p> <p>50g charge is considered minimum requirement for the coarse nature of the gold. Larger screen fire assays and 1kg Leachwell determinations will be conducted periodically as a QAQC check.</p> <p>Large diameter (83mm) PQ3 core was maintained (where conditions allow) for DD holes to MDD016 and subsequently HQ3 (61mm) for drillholes MDD017 to MDD020.</p> <p>DD core drill samples are sawn in 1/2 along the length of the core on cut lines marked by geologists perpendicular to structure / foliation or to bisect vein mineralisation for representative samples whilst preserving the orientation line. Intervals required for QAQC checks are 1/4 core from 1/2 sections of core to be sent for assay.</p> <p>QAQC procedures include field replicates, standards, and blanks at a frequency of ~4% and cross-lab assay checks at an umpire laboratory.</p>



Criteria	JORC Code explanation	Commentary
<b><i>Quality of assay data and laboratory tests</i></b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p> <p><i>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.</i></p>	<p>DD core 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) by SGS laboratory Waihi.</p> <p>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 seconds (90 seconds total).</p> <p>pXRF QAQC checks involve 2x daily calibration and QAQC analyses of SiO<sub>2</sub> blank and NIST standards (NIST 2710a &amp; NIST 2711a).</p> <p>For laboratory QAQC, samples (3*certified standards, blanks and field replicates) are inserted into laboratory batches at a frequency of ~4% and ~5% respectively. Samples are selected at the end of each drilling campaign to be sent to an umpire laboratory for cross-lab check assays.</p>
<b><i>Verification of sampling and assaying</i></b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>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 results from the larger samples are adopted. To date results are accurate and fit well with the mineralisation model.</p> <p>Some DD core holes have been sited adjacent to previous RC drillholes to provide twinned data.</p> <p>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.</p> <p>The database master is stored off-site and periodically updated and verified by an independent qualified person.</p> <p>There have been no adjustments to analytical data presented.</p>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<p><i>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.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>DD drillhole collar locations are accurate (+/- 50mm) xyz coordinates when captured by a licensed surveyor using RTK-GPS equipment.</p> <p>All drillholes to MDD018 have been surveyed by RTK-GPS equipment with MDD019R and MDD020 collar locations based on hand-held GPS coordinates with xy accuracy of +/-3 metres and RL accuracy to 0.5 metres from detailed LiDAR DTM.</p> <p>All drill holes reference the NZTM map projection and collar RLs the NZVD2016 vertical datum.</p> <p>DD down hole surveys are recorded at 12m intervals using a Reflex multi-shot camera.</p>
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>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.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>Drillhole collar spacing is variable and considered appropriate for determination of geological and grade continuity during this phase of the drilling programme. Site locations are dictated by availability of existing access tracks and gentler topography to allow safe working drill pad excavations in otherwise steep terrain.</p> <p>No compositing of samples is being undertaken for analysis. Sampling and assaying are in one metre intervals or truncated to logged features.</p>
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>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.</i></p>	<p>The majority of drillholes in this campaign are inclined to intercept mineralisation at a reasonable angle and facilitate core orientation measurements. There is not anticipated to be any introduced bias for resource estimates.</p>

Criteria	JORC Code explanation	Commentary
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<p>Company personnel manage the chain of custody from sampling site to laboratory.</p> <p>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.</p> <p>Polyweave bags with the calico bagged samples for assay are placed in steel cage pallets, sealed with a wire-tied tarpaulin cover, photographed, and transported to local freight distributor 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.</p>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p>An independent competent Person (CP) conducted a site audit in January of all sampling techniques and data management. No major issues were identified, and recommendations have been followed.</p>



## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b><i>Mineral tenement and land tenure status</i></b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<p>Exploration is being conducted within Exploration Permit 60311 registered to Matakanui Gold Ltd (MGL) issued on 13<sup>th</sup> April 2018 for 5 years with renewal date on 12<sup>th</sup> April 2023. MGL has the gold rights for this tenement. There are no material issues with third parties.</p> <p>The tenure is secure and there are no known impediments to obtaining a licence to operate.</p> <p>The Project is subject to a 1.5% Net Smelter Royalty (NSR) on all production from EP60311 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.</p>
<b><i>Exploration done by other parties</i></b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<p>Early exploration in the late 1800's and early 1900's included small pits, adits and cross-cuts and alluvial mining.</p> <p>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 RC holes by MGL in 2019.</p>

Criteria	JORC Code explanation	Commentary
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<p>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. Gold mineralisation is concentrated in multiple deposits along the RSSZ. In the Project area there are 4 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 is in a unit termed the “Hanging Wall Shear” (HWS) which lies immediately below the 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. Stacked stockwork vein swarms (SVS) occur deeper in the RSSZ.</p> <p>Unlike Macraes, the gold mineralisation in the oxide, transition and fresh zones is characterised by coarse free gold and silica- poor but extensive ankerite alteration.</p>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li><i>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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>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.</i></li> </ul>	<p>Refer to the body of text.</p> <p>No material information has been excluded.</p>

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<p>Significant gold intercepts are reported using 0.25g/t Au lower grade cut-offs with 4m of internal dilution included. Broad zonation is:</p> <p>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.</p> <p>Metal unit (MU) distribution, where shown on maps and in tables are calculated from drill hole Au (&gt;0.25g/t) * associated drill hole interval metres.</p> <p>pXRF analytical results reported for laboratory pulp returns are considered accurate for the suite of elements analysed.</p> <p>Where gold assays are pending, minimum 1,000 ppm composited arsenic values provide a preliminary representation of potential mineralised zones and include 4m &lt;1,000 ppm internal dilution.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<p>All intercepts quoted are downhole widths.</p> <p>Intercepts are associated with a major 20-120m thick low-angle mineralised shear that is largely perpendicular to the drillhole traces.</p> <p>Aggregate widths of mineralisation reported are drillhole intervals &gt;0.25g/t Au occurring in low-angle stacked zones.</p> <p>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.</p>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<p>Refer to figures in the body of the text.</p>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<p>All significant intercepts have been reported.</p>



Criteria	JORC Code explanation	Commentary
<b><i>Other substantive exploration data</i></b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	Not applicable; meaningful and material results are reported in the body of the text.
<b><i>Further work</i></b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<p>DD drilling down dip / down plunge to the north of existing resources is continuing at RAS on ~100 metre step-out east-west drill sections.</p> <p>Further work will follow at RAS and CIT deposits as results dictate, which may include infill RC, further DD core drilling, and metallurgical test-work.</p> <p>A new 2021 MRE update (to JORC Code 2012) was completed in September 2021 which increased Inferred Resources 155% to 643Koz from the 252Koz 2019 MRE (0.25g/t lower cut-off). Potential extensions to mineralisation and resources are shown in figures in the body of the text.</p>