Red River increases Hillgrove Resource to +1Moz Gold & 90kt Antimony

Highlights:

- **Red River increases Hillgrove JORC 2012 Mineral Resource to 7.23Mt @ 4.5g/t Au & 1.2% Sb (6.2g/t Au Eq.[1]) containing 1.04 million ounces of gold and 90kt of antimony**
- **Contained gold at Hillgrove increased 54% and contained antimony increased 20%**
- **Positions Hillgrove as Australia's largest antimony resource and the 9th largest in the world**
- **Antimony has been designated as a critical mineral by the Australian Government[2]**
- **JORC 2012 Compliant Mineral Resource for Eleanora & Garibaldi Lodes increased to 2.4Mt @ 4.7g/t Au & 0.6% Sb (5.5g/t Au Eq.) (362koz contained Au & 15kt contained Sb)**
- **Red River completed drilling to remodel Eleanora & Garibaldi deposit to update the previous Mineral Resource (JORC 2004) to the JORC 2012 reporting standard**
- **Red River will assess mining opportunities for Eleanora/Garibaldi and further drilling to grow the Hillgrove Mineral Resource**

Figure 1: *Hillgrove Plant & Surface Infrastructure*

Red River Managing Director Mel Palancian said, *"It's a fantastic milestone to grow our Hillgrove resource to more than 1 million ounces of gold and 90kt of antimony, making Hillgrove the ninth largest antimony resource in the world, in the best location.*

"Hillgrove has significant growth potential both in resources and scale. All deposits remain open and we have defined a large number of targets and control the whole mineral field so we are confident that we can

[1] Gold Equivalent (g/t) (Au Eq.)= (Gold g/t) + (1.424 * Antimony %)
[2] https://www.industry.gov.au/sites/default/files/2019-10/outlook-for-select-critical-minerals-in-australia-2019-report.pdf

continue to build the scale of the Hillgrove project. Drilling has also shown there is halo mineralisation that has not previously been identified and pursued".

"Building the scale of the Hillgrove project is considered to be a significant value creating opportunity for our shareholders and I'm looking forward to seeing the results of our future exploration and drilling over the coming quarters."

Red River Resources Limited (ASX: RVR) ("Red River"", "RVR or "the Company") is pleased to announce a JORC 2012 compliant Eleanora/Garibaldi Mineral Resource of 2.4Mt @ 4.7g/t Au & 0.6% Sb & (5.5g/t Au Eq.) (362koz contained Au & 15kt contained Sb) at its Hillgrove Gold Project in NSW (Table 1). The additional Eleanora and Garibaldi resource brings the total Hillgrove resource to **7.23Mt @ 4.5g/t Au & 1.2% Sb (6.2g/t Au Eq)** (Table 2).

This increase to more than 1Moz of gold confirms the high potential of the Hillgrove gold project. RVR's continued successful exploration programs have identified wider halo mineralised zones surrounding the high-grade lodes while also updating the Eleanora and Garibaldi JORC 2004 resource to JORC 2012 compliance.

The updated JORC 2012 Mineral Resource increases contained antimony at Hillgrove to 90,000 tonnes, making Hillgrove the 9th largest antimony resource in the world and the largest in Australia.

RVR is investigating alternate mining and processing scenarios (increased tonnages) to maximise value of the Hillgrove resource which may result in a new strategy for the project. However, RVR believes the lack of drilling and sampling at Hillgrove over the past 50 years is a great opportunity to add additional resources through future drilling campaigns.

Previous operations have focussed on high-grade mineralisation. The significant lower grade portions and halo mineralisation has largely been discounted due to small-scale operations and lower gold prices. As a result, the resources are not well defined at lower cut-off grades due to a lack of drilling and sampling, providing significant potential upside.

Table 1: Eleanora and Garibaldi Lode Mineral Resource at a 3.0 g/t Gold Equivalent Cut-off Grade

Lode	Classification	Tonnes	Gold	Antimony	2021 Gold Equivalent (Au Eq.)	Contained Gold	Contained Antimony
		(kt)	(g/t)	(%)	(g/t)	(koz Au)	(kt Sb)
Eleanora	Measured	-	-	-	-	-	-
	Indicated	875	5.8	0.5	6.6	164	5
	Inferred	766	4.3	0.2	4.6	106	1
	Total	1,641	5.1	0.4	5.7	270	6
Garibaldi	Measured	-	-	-	-	-	-
	Indicated	548	3.5	1.2	5.3	62	7
	Inferred	221	4.2	0.8	5.3	30	2
	Total	770	3.7	1.1	5.3	92	8
Eleanora & Garibaldi	Measured	-	-	-	-	-	-
	Indicated	1,424	4.9	0.8	6.1	226	11
	Inferred	987	4.3	0.3	4.8	136	3
	Total	2,411	4.7	0.6	5.5	362	15

Tonnages and grades are rounded. Discrepancies in totals may exist due to rounding.
Gold equivalent (Au Eq.) grades reported using metal selling prices as outlined in this announcement.

Table 2: Hillgrove Gold Project Mineral Resource

Lode	Classification	Tonnes	Gold	Antimony	2021 Gold Equivalent (Au Eq.)	Contained Gold	Contained Antimony
		(kt)	(g/t)	(%)	(g/t)	(koz Au)	(kt Sb)
Eleanora & Garibaldi	Measured	-	-	-	-	-	-
	Indicated	1,424	4.9	0.8	6.1	226	11
	Inferred	987	4.3	0.3	4.8	136	3
	Total	2,411	4.7	0.6	5.5	362	15
Blacklode & Sunlight	Measured	-	-	-	-	-	-
	Indicated	1,511	5.3	1.3	7.1	255	20
	Inferred	1,136	3.6	0.9	4.9	131	10
	Total	2,647	4.5	1.1	6.2	387	30
Brackin's Spur	Measured	73	5.1	0.9	6.4	12	1
	Indicated	640	4.2	1.8	6.8	86	12
	Inferred	870	4.8	1.3	6.7	134	11
	Total	1,583	4.6	1.5	6.7	233	23
Clark's Gully	Measured	170	1.9	4.2	7.9	10	7
	Indicated	96	2.1	3.1	6.5	6	3
	Inferred	0	0.8	3.0	5.1	0	0
	Total	266	2.0	3.8	7.4	17	10
Syndicate	Measured	199	4.5	4.5	10.9	29	9
	Indicated	96	2.5	2.4	5.9	8	2
	Inferred	23	3.6	0.4	4.1	3	0
	Total	318	3.8	3.6	8.9	39	11
Total	Measured	442	3.6	3.8	9.0	51	17
	Indicated	3,766	4.8	1.3	6.6	582	48
	Inferred	3,017	4.2	0.8	5.3	404	25
	Total	7,226	4.5	1.2	6.2	1,037	90

Tonnages and grades are rounded. Discrepancies in totals may exist due to rounding.
2021 Gold equivalent (Au Eq.) grades reported using metal selling prices as outlined in this announcement.

Mineral Resource cut off and Source:
Eleanora & Garibaldi Mineral Resources reported to a cut-off grade of 3g/t Au Eq. (July 29, 2021)
Blacklode & Sunlight Mineral Resources reported to a cut-off grade of 3g/t Au Eq. (August 17, 2020)
Syndicate Mineral Resources reported to a cut-off grade of 3g/t Au Eq. (September 29, 2020)

Brackin's Spur & Clark's Gully Mineral Resources reported to a cut-off grade of 5 g/t Au Eq. (calculated using metal selling price, recoveries, and other assumptions at the time of the estimate, AMC Consultants Pty. Ltd. Hillgrove Mineral Resource Estimate, August 2017) (July 3, 2019)

The Bakers Creek Stockpile Mineral Resource previously reported has been removed due to expected complete depletion by end of September 2021

Global Antimony Resources

The updated Mineral Resource inventory positions Hillgrove as the largest antimony resource in Australia and ninth largest in the world making it a globally significant resource (Figure 2).

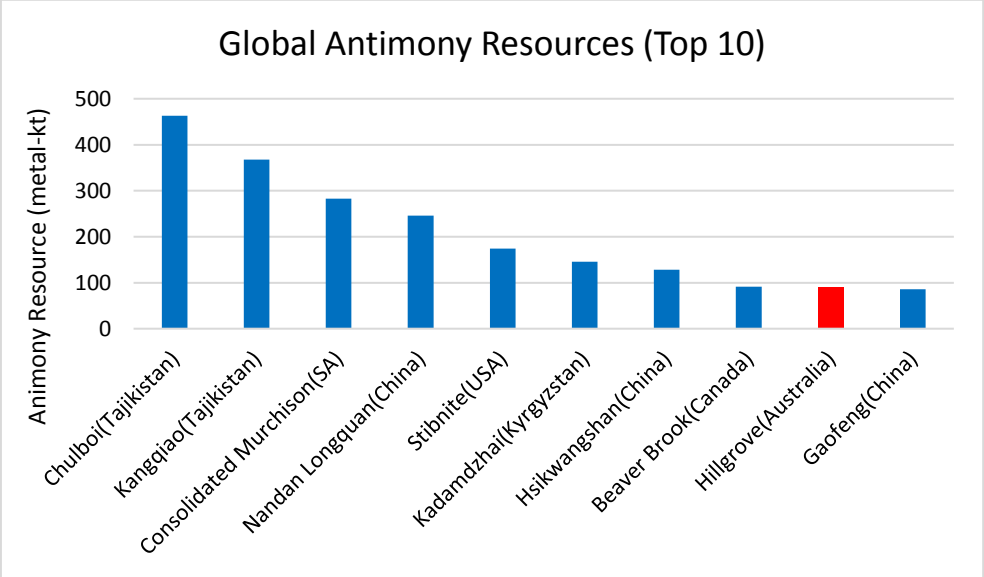

Figure 2: *Global Antimony Resources*[3]

Eleanora and Garibaldi Mining Centre

The Eleanora and Garibaldi Lode System is located adjacent to the Hillgrove Processing Plant and 1.5km to the east of the Metz Mining Centre (including Syndicate, Blacklode and Sunlight) (Figure 3). The Eleanora and Garibaldi Lode System was initially mined until the 1920s then mined from the late 1970s through to 1992 by New England Antinomy Mines (NEAM), with mining to Level 11 (310m below surface achieved).

Between 2004 and 2008, Straits Resources advanced knowledge of the project through significant underground and surface drilling programs which included the re-establishment of the Level 9 workings (1740mRL). To date, Red River Resources has completed 24 diamond drill holes over the 1.2km strike extent. These holes confirm and validate the earlier sampling programs and allow the reporting of Mineral Resources to the JORC 2012 reporting standard.

The Eleanora and Garibaldi Lode System is defined over a 1.3km NNW striking shear structure. The mineralisation is generally contained within a narrow shear/breccia that displays multiple hydrothermal fluid events and structural reactivation. The structure and mineralisation are near continuous and contain steeply south plunging shoots of higher-grade Sb-Au mineralisation (Figure 5). The Garibaldi area is located on two southern shoots with the Eleanora area to the north. Extension drilling to the south of the Garibaldi area defines the reported Garibaldi Mineral Resource which extends from surface to a depth of 315m over a strike of 350m. The reported Eleanora Mineral Resource contains remnant mineralisation north of the Garibaldi shaft and the continuation of the mineralisation to 220m below the lowest mining level and 540m below surface (Figures 5 & 6).

[3] S&P Global Market Intelligence 2021

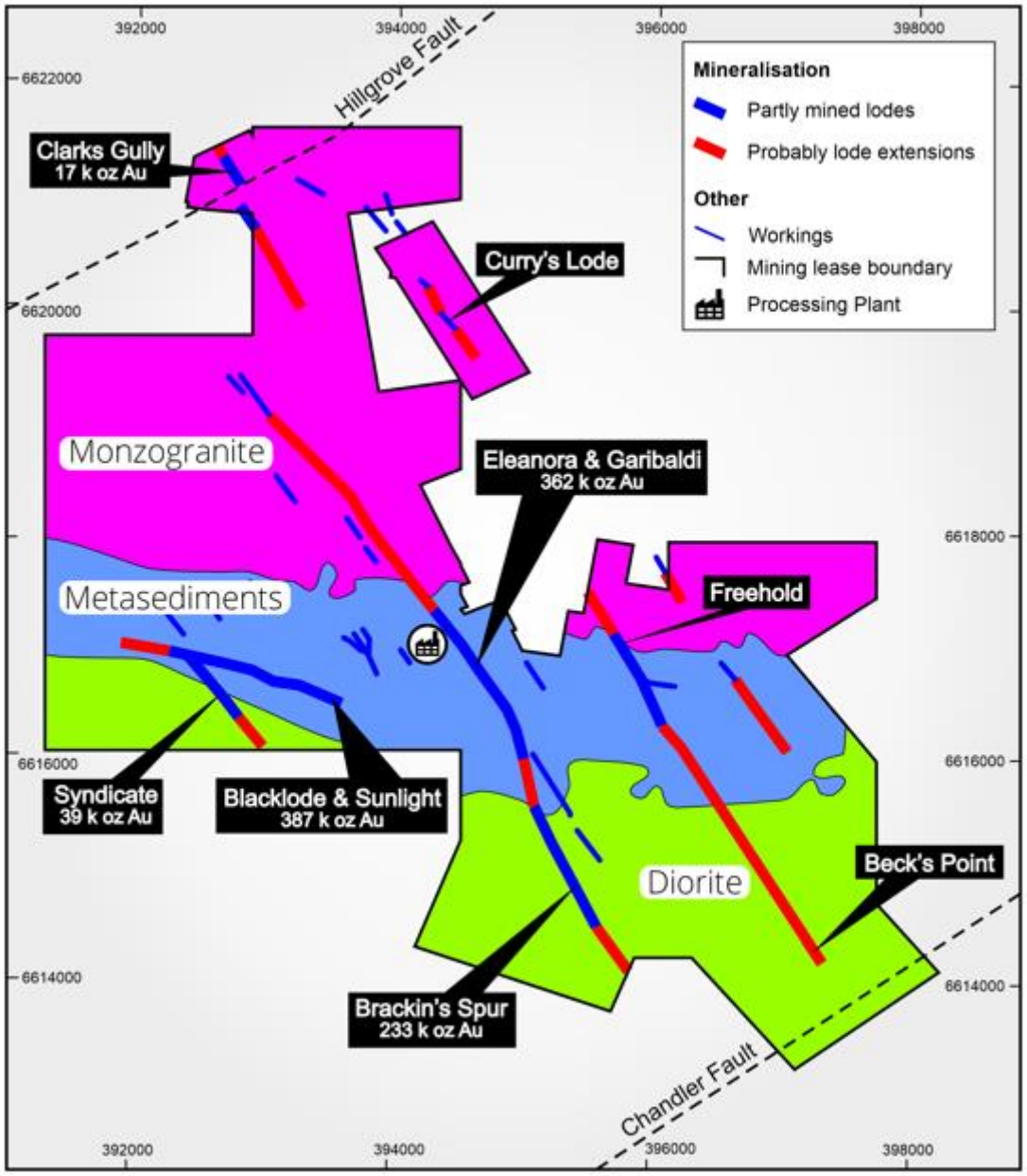

Figure 3: *Hillgrove Regional Geology Plan*

The Mineral Resources are hosted within the Girrakool Metasediment package (Figure 3). The structure and mineralisation extend north into the Hillgrove Adamellite, but no resources have been reported into this area and further drilling is required. Although the mineralisation is generally strongest on the main structure splays, parallel structures and network veining host hanging wall and footwall mineralisation. A lamprophyre dyke of generally around 1m width has intruded along the mineralised structure and often divides the mineralisation into parallel lodes, each generally of 0.5 to 3m width.

Adjacent to the Garibaldi shaft the main structure is offset 5m to the east, from this point the lode is referred to as the Garibaldi lode. It extends to the south where an additional two parallel lodes are defined in the east wall. Of these lodes the eastern lodes become more dominant towards the south.

Figure 6 displays the Resource Classification assigned to the Eleanora/Garibaldi Mineral Resource and the historic mine workings.

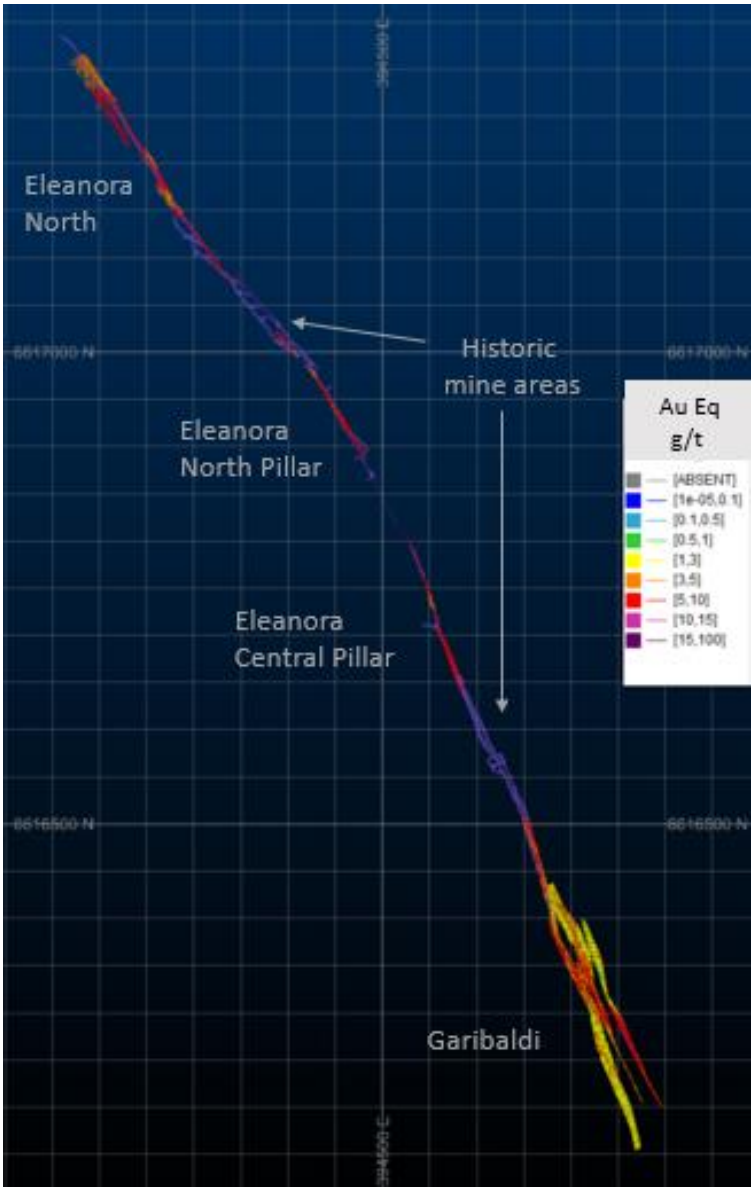

Figure 4: *Plan section of the Eleanora and Garibaldi Mineral Resources and past development. Section on the 1850m RL with ±20m viewing.*

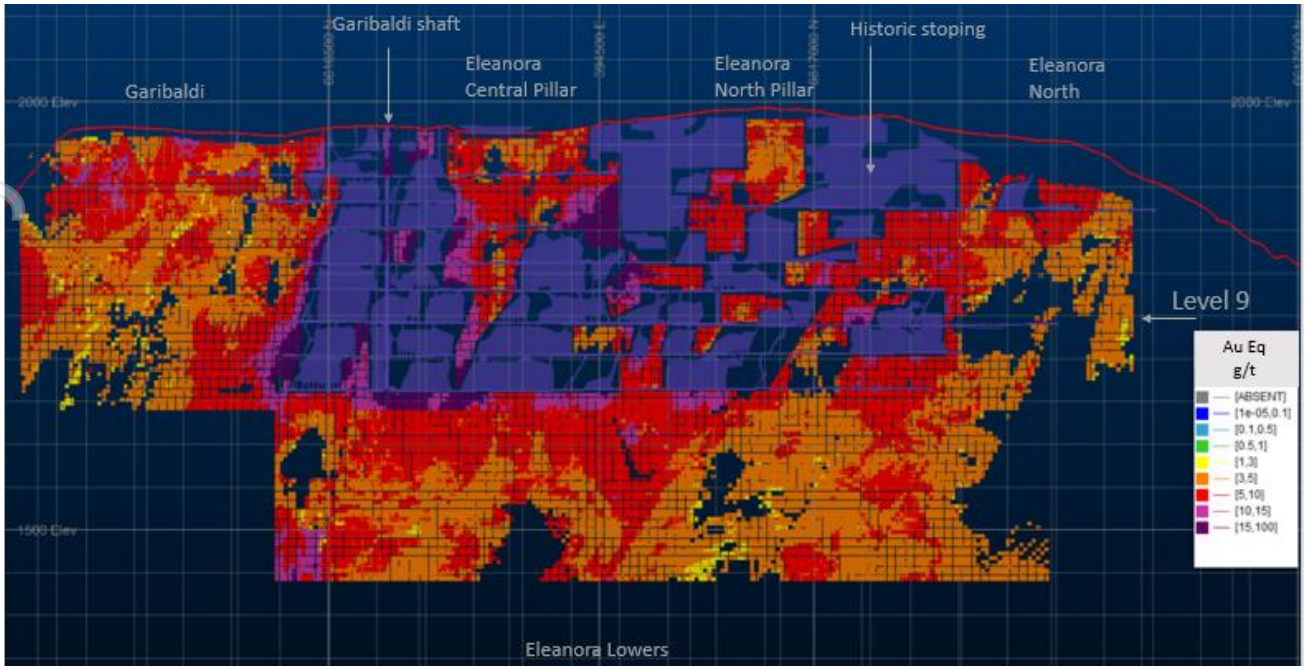

Figure 5: *Long Section of Eleanora and Garibaldi*

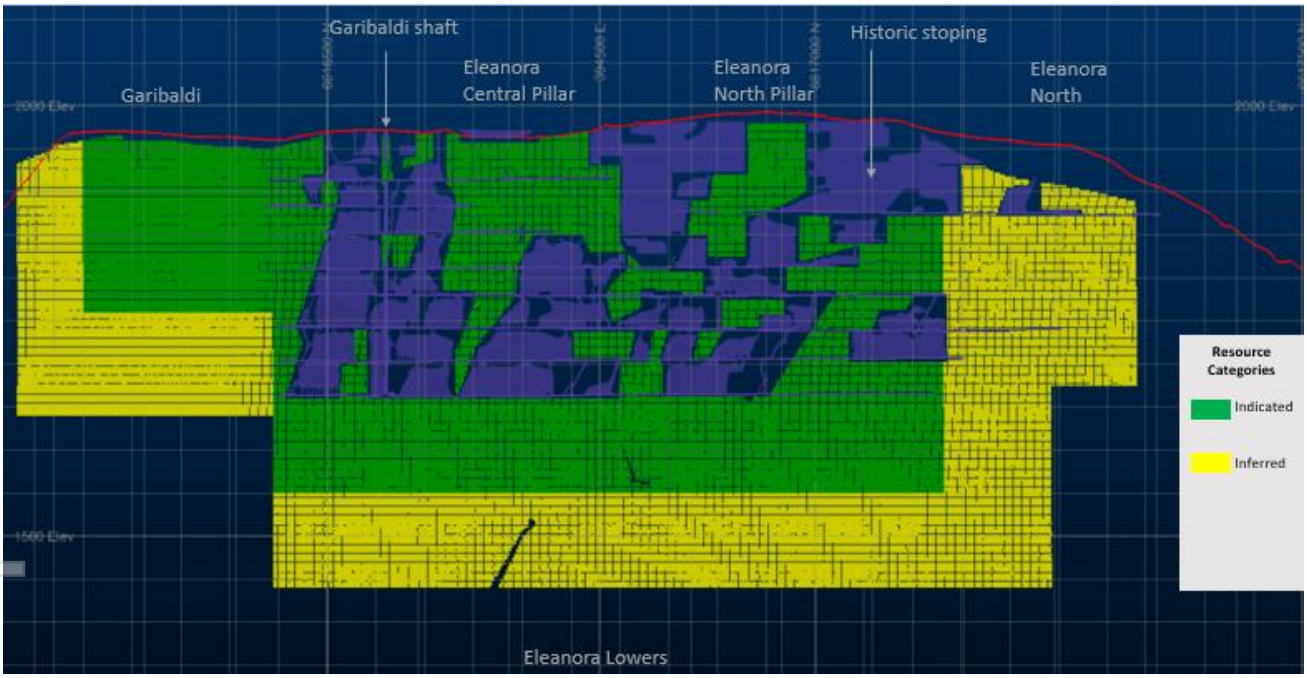

Figure 6: *Eleanora and Garibaldi Mineral Resource Classification*

Geology and Geological Interpretation

The Hillgrove Mineral Field is cut by two regional scale faults of ENE strike, the Hillgrove Fault on the northern margin and the Chandler Fault on the southern margin (Figure 3). These faults have a sinistral (left lateral) throw, with interpreted displacements of up to 500m. Both faults pre-date the mineralisation, with late reactivation opening dilation zones along the shear structures between the bounding faults. These dilation zones provide favourable sites for mineralisation. Nearly all the mineralised shears at Hillgrove are associated with a NW trending structural belt between the two faults, with dips commonly 70° to vertical. A major structure running through the centre of the field from Brackin's Spur in the south, through the Garabaldi and Eleanora mines, to the Cosmopolitan deposits in the north can be traced over a strike length of 4kms. The Metz Mining centre is located to the west of this structure.

Gold and antimony mineralisation at Hillgrove are structurally controlled. The deposits exhibit various styles of hydrothermal activity, with veining ranging from simple single veins through parallel stringers to quartz stockwork and wall rock breccias. All major veins have been intruded along shears with sinistral (left lateral) movement. The shears range in width from millimetre to multiple metre widths. Splits in the veins enclose high grade mineralised zones where tension gash type stringer veins cut across the enclosed rocks. Splay veins enclose similar zones that die out as the vein diverges away from the main lode.

The veins are the result of multi-phase fluid emplacement in the following sequence:

- Barren quartz veins
- Quartz – scheelite ($CaWO_4$) veining
- Quartz – arsenopyrite – pyrite – gold veining
- Quartz – stibnite (Sb_2S_3) – gold veining
- Quartz – stibnite – calcite veining
- Barren quartz-chlorite veining

All phases occur within ore bearing structures, with the first two phases often sealing structures in the granites resulting in restrictions to later phases. The arsenopyrite phase forms a broad halo of fine parallel veins in a siliceous-sericitic alteration. It appears that all wall rock alteration is associated with this phase, as there is little dispersion of stibnite into surrounding rocks. Alteration effects are commonly on the scale of metres around structures, occurring via pervasive fluid flow, with the more focused quartz-stibnite open space filling phase following. The arsenopyrite phase is responsible for most of the refractory gold in the deposits with the particle free gold associated with the quartz-stibnite-gold phase.

Ore grade material in structures is restricted to vertical or steeply plunging 'ore shoots', caused by localised flexures forming dilational jogs. The ore shoots generally occupy up to 60% of the structures with good vertical continuity.

Background - Hillgrove Project

The Hillgrove Gold Project is located 23km east of Armidale in New South Wales. High-grade gold-antimony-tungsten mineralisation was discovered at Hillgrove in 1857, and modern mining operations commenced at Hillgrove in 1969. To date, Hillgrove has produced more than 730,000 ounces of gold (in bullion and concentrates), more than 50,000 tonnes of antimony (as metal and in concentrates) plus material amounts of by-product tungsten (in concentrates). Red River acquired the Hillgrove Gold Project in August 2019 from a private vendor.

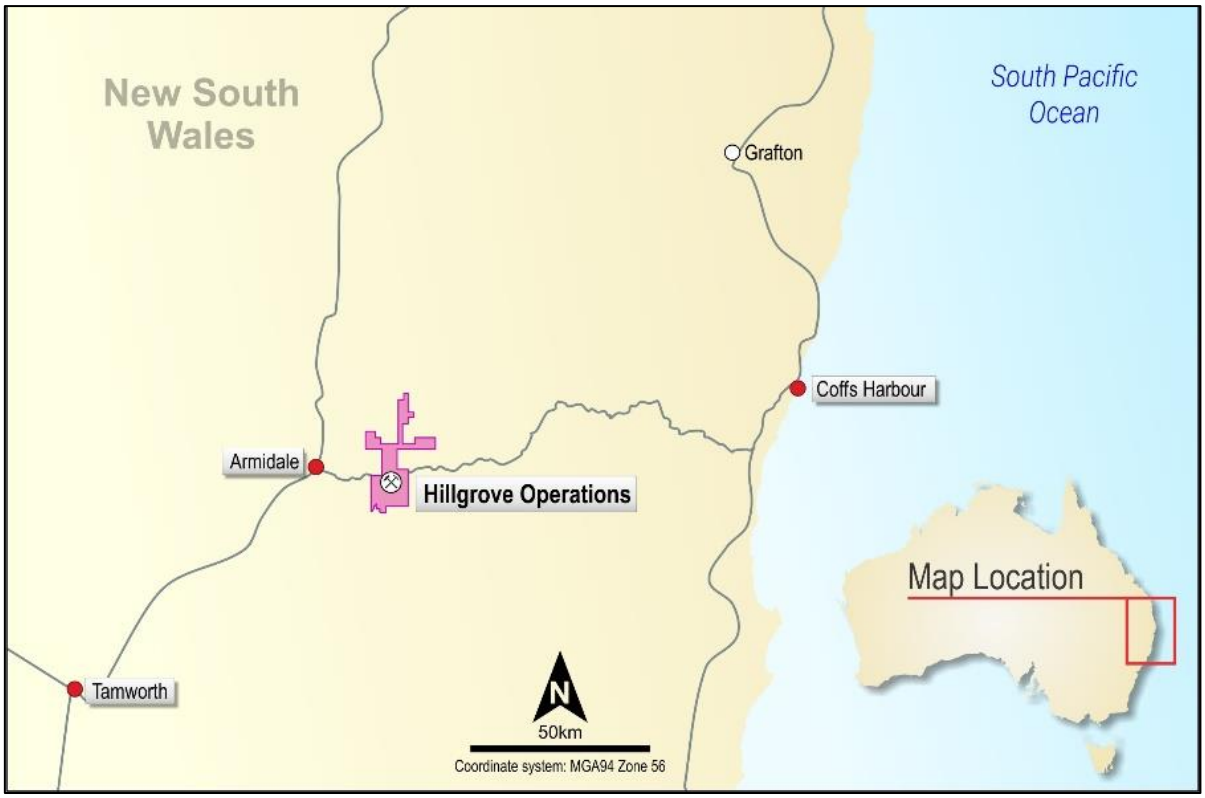

Figure 7: *Location of Hillgrove*

Orogenic gold-antimony-tungsten mineralisation at Hillgrove is hosted in multiple steeply dipping vein/shear systems contained within the Hillgrove Mineral Field. There is a strong zonation in the vein systems transitioning from shallow antimony dominant mineralisation to gold dominant mineralisation at depth. All known vein systems are open at depth, with potential transition to high grade gold dominant mineralisation at depth.

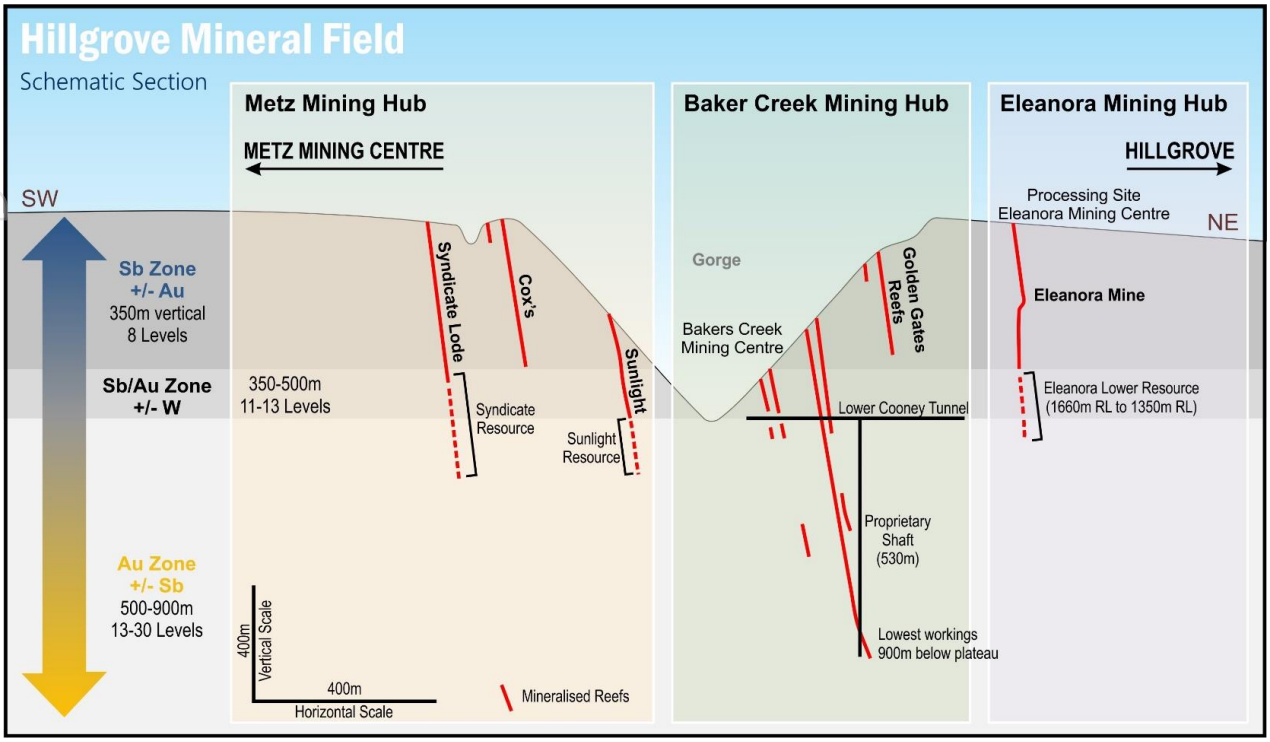

Figure8: *Hillgrove Mineral Field Schematic Section*

The Hillgrove Mineral Field covers approximately 9km x 6km, with more than 200 individual mineral occurrences identified in field. Red River controls the entirety of the Hillgrove Mineral Field and holds 225km^2 of exploration leases and 17km^2 of mining leases (or equivalent).

Drilling, Sampling and Sub Sampling Techniques

Drilling around the Hillgrove Mineral field is challenging due to steep gorge terrain. Early exploration was limited to underground mine development on mineralised lodes and channel sampling. In recent times predominantly underground drilling followed by mine development and channel sampling has been used to test deposits and define Mineral Resources.

From the 1970s through to 2000, mine development and stoping fronts in the Eleanora and Garibaldi areas by NEAM were routinely channel sampled (Table 4). Sampling exists on eight levels and through the majority of the stoping areas (excluding the early upper sections of Eleanora mine). Sampling covers up to 1.2km of strike and 310m vertical extend. A total of 7976 face and stope channels (9,063m) were sampled to geological/mineralisation contacts via rock chipping across development drive faces.

Records for the early sampling are not available but in the later year's documentation states the following: The sampling was undertaken by experienced geologists. The channels targeted the central high-grade antimony mineralisation and often do not sample the Au-As edge mineralisation. The channels were sampled perpendicular to the strike of the lode and spaced at 1.5m along strike. Individual samples were generally between 0.1 and 1m in length and 0.5 to 5kg in size, they were crushed to minus 1cm, and riffle split with 100g pulverised and a 10g portion collected for digestion and AAS analysis.

A total of 107 sludge sample holes (160.5m) were drilled by Straits in 2008 and 19 wall samples (137.3m) were taken by Straits in 2004. Additional miscellaneous underground percussion sludge drilling and wall channel sampling are shown in Table 6.

The Eleanora and Garibaldi systems were drilled by NEAM, Straits and Red River through both reverse circulation and diamond methods from the surface and from underground locations (Table 5). In the past, 136 holes were completed for 25,836m of drilling (including 26 reverse circulation holes for 4205.6m). Core sizes range from BQTK, LTK48, NQ2, or HQ3.

In 2020 and 2021, Red River completed 24 holes for 3,962.1 downhole drill metres of NQ size core. Drilling was geologically logged and photographed. Sampling to geological intervals was undertaken. Drill core intervals were cut in half using a core saw and dispatched to an independent laboratory for analysis.

Table 4: Eleanora & Garibaldi Face and Stope Channel Sampling Summary

Drillhole Prefix	Count	Year*	Company	Drilling Method	Total Length (m)	Area
ELEA_L2_CH0001- 0197	197		NEAM	FS	357.82	Eleanora
ELEA_L3_CH0001-0177	177		NEAM	FS	324.84	Eleanora
ELEA_L4_CH0001-0463	462		NEAM	FS	684.28	Eleanora
ELEA_L7_CH0001-0946	945		NEAM	FS	1064.75	Eleanora
ELEA_L8_CH0001-0749	747	1985-86	NEAM	FS	769.31	Eleanora
ELEA_L9_CH0001-1277	1277	1981-2000	NEAM	FS	1414.5	Eleanora
ELEA_L10_CH001-1574	1573	1989-95	NEAM	FS	1700.62	Eleanora
ELEA_L11_CH0001-0983	981	1991-96	NEAM	FS	1160.65	Eleanora
GARA_L2_CH0001-0116	115	1976-83	NEAM	FS	146.7	Garibaldi
GARA_L3_CH0001-0170	170	1976-88	NEAM	FS	180.64	Garibaldi
GARA_L4_CH0001-0158	158	1976-88	NEAM	FS	172.33	Garibaldi
GARA_L6_CH0001	1	1986	NEAM	FS	0.17	Garibaldi
GARA_L7_CH0001-319	319	1987-89	NEAM	FS	284.91	Garibaldi
GARA_L8_CH0001-0231	231	1986-91	NEAM	FS	339.48	Garibaldi
GARA_L9_CH0001-0261	261	1985-87	NEAM	FS	322.89	Garibaldi
GARA_L10_CH0001-0169	169	1991-92	NEAM	FS	73.73	Garibaldi
GARA_L11_CH0001-0193	193	1991-92	NEAM	FS	65.5	Garibaldi

**Years indicate majority of level sampling activity, very minor additional sampling on various levels occurred in 2000,2004,2005.*

Table 5: Eleanora & Garibaldi Drilling Summary

Drillhole Prefix	Count	Year	Company	Drilling Method	Total Length (m)	Area
65, 66	2		NEAM	Diamond	17.27	Garibaldi
76-78	3		NEAM	Diamond	60.13	Eleanora
118-120	3		NEAM	Diamond	38.66	Eleanora
130-140	11		NEAM	Diamond	466.71	Eleanora
148-151	4		NEAM	Diamond	119	Eleanora
163, 163C, 164,	3	(1997)	NEAM	Diamond	1537.2	Eleanora
167	1	(1997)	NEAM	Diamond	259.6	Garibaldi
168	1	(1997)	NEAM	Diamond	267	Eleanora
ELG001-018	18	2004	Straits	Reverse Circulation	2940	Garibaldi
ELG019	1	2004	Straits	RC/Diamond	156.7	Garibaldi
ELG020-022	3	2004	Straits	Reverse Circulation	406.6	Garibaldi
ELG023-ELG028	6	2004	Straits	Diamond	1070.7	Eleanora
ELG029-031	3	2005	Straits	Diamond	402.7	Eleanora
ELG032-036	4	2005	Straits	Reverse Circulation	609	Eleanora
ELG037	1	2005	Straits	Reverse Circulation	250	Garibaldi
ELG038-042	5	2005	Straits	Diamond	1661.4	Eleanora
ELG043-071	29	2006	Straits	Diamond	1052.1	Eleanora
ELG074-098	25	2007	Straits	Diamond	7033	Eleanora
ELG099-105	7	2008	Straits	Diamond	4153.1	Eleanora
ELG106, 106A, 106B -110	6	2008	Straits	Diamond	3335.2	Garibaldi
ELG136 - 141	6	2020	Red River Resources	Diamond	738.9	Eleanora Pit Pillar
ELG142 - 144	3	2020	Red River Resources	Diamond	207.9	Eleanora Nth Pillar
ELG145 - 148	4	2020	Red River Resources	Diamond	760.1	Eleanora Pit Pillar
ELG149, 150	2	2020	Red River Resources	Diamond	345.3	Eleanora Nth
ELG151	1	2021	Red River Resources	Diamond	236.8	Eleanora Nth
ELG152 - 159	8	2021	Red River Resources	Diamond	1673.1	Garibaldi

Table 6: Eleanora & Garibaldi Sludge and Wall Channel Sampling Summary

Drillhole Prefix	Count	Year	Company	Drilling Method	Total Length (m)	Area
AL_ELA_L11	54	2005	Straits	SS	81	Eleanora
AL_ELA_L9	53	2005	Straits	SS	79.5	Eleanora
EL01_1745	2		NEAM	WS	0.4	Eleanora
HGCH	19	2004	Straits	WS	137.3	ELIZ

Classification Summary

The Mineral Resources have been classified according to the confidence in sample data, sample spacing and confidence in the modelled continuity of both the thickness and grade of the mineralized material. Indicated and Inferred blocks have been reported.

The resource classification is deemed appropriate in relation to the drill spacing and geological continuity of the mineralized domains, recovery, sample spacing and QAQC results. The classification appropriately reflects the Competent Persons confidence of the estimate of the ore body.

Indicated areas are sampled either through development and channel sampling or diamond drilling generally at 30 m to 60 m spacing. Inferred areas are extensions beyond Indicated areas and are drilled out to a 100m drill hole spacing. Extrapolation beyond drill holes is limited to generally 60m. Twelve drill intersections occur between 130m and 280m below the currently defined resource. Although this drilling demonstrates that the hosting shear and mineralisation continue at depth further drilling is required prior to incorporating this area into the Mineral Resource.

The previous Resource at Eleanora and Garibaldi was reported to the JORC 2004 standard and was undertaken prior to Red River obtaining the Hillgrove operation. This previous Resource contained Measured Resources in the Eleanora area surrounding the old workings. Although this area is supported by development and close spaced channel sampling the lack of QAQC documentation and the possibility of unquantified sample bias being introduced during channel sampling lowers the confidence level of the estimate based on this data. For this reason, the area has been classified as Indicated.

Sample Analysis Method

Diamond drilling was the preferred sampling method, with the intervals to be assayed determined by Hillgrove's geologists. Sections of the core consist of barren metasediments and was not sampled. Sample intervals were selected based on visual identification of the mineralisation, alteration, quartz veining style, occurrences of sulphides and proximity to lode systems.

All core processing was carried out on-site by geological staff. To provide a consistent sample, the core was cut in half using an Almonte diamond saw along the orientated core mark. Sampling within the ore zone was broken down by mineralisation style, generally a minimum sample length of 20cm and a maximum not exceeding 2.0m. Sample length average 0.8m length around the ore zones, and the core was usually sampled to a minimum of 5m away from the mineralisation to provide dilution grade information for potential mining purposes. The northern half of the core was sampled, and each sample length was given a unique sample number and bagged separately before being dispatched to the laboratory.

Laboratory Procedure

For most drill hole samples taken between 2004 to 2021, assaying was carried out by the external and independent Australian Laboratory Services (ALS) Brisbane facility, which is ISO 9001 accredited. ALS provide both sample preparation and chemical analysis service and undertake regular internal quality control checks on the assay data reported. Hillgrove regularly tested for a group of ten elements (Ag, As, Au, Cu, Fe, Pb, S, Sb, W and Zn) over the known deposits. Sample preparation at ALS (Brisbane) uses the standard industry method as follows:

- Samples are received, weighed, and dried (four hours at 105^{o}C)
- Samples up to 3.3kg are jaw crushed to a nominal 70% passing 6mm. if weighing more than 3.3kg, the sample is split and 50% of the sample is used.
- The entire sample is pulverised to 85% passing 75µm.
- The sample is then split and 200g is used for analysis and the remainder is bagged and sent back to Hillgrove.

Gold grades were determined by fire assay with an atomic absorption spectroscopy (AAS) finish, by the following procedure:

- A nominal 100g pulverised sample is dispatched to ALS (Townsville) for fire assay.
- A 50g sample of pulp is fused with a mixture of flux, inquarted with 6mg of gold free silver, and cupelled to yield a metal bead.
- The bead is digested in 0.5ml dilute nitric acid in a microwave oven. A 0.5ml aliquot of concentrate hydrochloric acid is then added and the bead is further digested in the microwave oven.
- The digested solution is cooled then diluted to a total volume of 10ml with water.
- The solution is then analysed by AAS against matrix matched standards.
- Core samples with visible gold and samples returning an assay greater than 10ppm Au, are also assayed using the screen fire assay method

Antimony, arsenic and tungsten grades were determined by acid digest and analysed by ICP-AES (inductively coupled plasma-atomic emission spectrometry) by the following procedure:

- A 0.25g pulverised sample is oven dried before pre-oxidation and decomposition by fusion with lithium borate flux containing 20% sodium nitrate as an oxidising agent. The resulting melt is poured to produce a fused disk.
- The disk is analysed using a wavelength dispersive X-Ray fluorescence spectrometer.
- In 2020, 8 holes (ELG137-ELG143) were analysed at SGS Townsville Laboratory using equivalent methods as described above.

NEAM utilised the following laboratory procedure for channel sampling. NEAM rock chip channel samples were 0.5 to 5kg in size, they were crushed to minus 1cm and riffle split with two 100g portions created, one was pulverised and a 10g portion collected for digestion and AAS analysis at the onsite NEAM Laboratory. Routine duplicate coarse crush was sent to an external third-party lab for Quality control via XRF and Fire Assay.

Estimation Methodology

Studio RM (Datamine) software was used for domain creation, block model construction and grade estimation. Snowden Supervisor software was used for statistical analysis and to develop model parameters.

Domains controlling the resource are based on geology and intensity of mineralisation where the presence of quartz-arsenopyrite veining +/- quartz-breccias and/or the presence of stibnite occurring as massive or in veins indicates lode mineralisation.

The difference in channel and drillhole sample selectivity was noted and considered during the domaining and estimation process. The Resource classification is applicable to the material contained within the domains. Sections of the model based on channel samples only lack sufficient data in the local hanging wall and footwall areas to extend the Resource beyond the domain defined by channel sampling.

In total, seven domains in the Eleanora area and three in the Garibaldi area were estimated.

Downhole sample compositing within domains to approximate 0.5m true thickness was undertaken on the majority of sampling, low angle intersections were composited to larger downhole intervals to eliminate bias. Anomalously high gold and antimony grade values were top-capped. The use of different sample types (channel and drill hole) was considered during the estimation and classification process. Delustering of channel samples was applied. Limits to the extent of influence of channel samples was applied whereby channel samples were not used in the estimation of the Eleanora Resource below the 1640mRL level.

Where sufficient data, variography on individual domains was used to develop model estimation parameters. For domains with less data, model parameters were shared from more well-defined domains. A 3D block model rotated to approximate strike of the system was developed, block size of 5m x 2.5m x 5m was considered appropriate for the closest spaced data.

Surveyed underground development was used to exclude mined out material from the model. No allowance is made for the recovery of by-products. Underground mining methods assume a selective approach to limit dilution however the actual dimensions are not assumed in the resource models. The correlation between bulk density and antimony content is used. Model validation was conducted by visually checking drillhole grades to block grades in plan and section view, and by reviewing. Full width domain intervals were checked against local block model grades. Full width domain intervals were checked against domain thickness, for conservation of volume. Historical Mine production showing a high antimony bias from estimates based on channel samples was considered.

Cut-off grade(s), including the basis for selected cut-off grade(s)

The JORC 2012 Eleanora and Garibaldi Mineral Resources are reported above a gold equivalent (Au Eq.) cut-off of 3 g/t Au Eq and above a minimum across strike contained metal content of 3-gram metres Au Eq. The application of the minimum across strike contained metal cut off ensures that resources have sufficient grade and width to be potentially economic.

The use of a gold equivalent cut-off is appropriate for the multi-element mineralisation at Hillgrove, where value is obtained from antimony and/or gold. The gold equivalent allows for a basic level of assessment and comparison of the varying deposits and mineralisation styles seen at Hillgrove.

The gold equivalent (Au Eq.) is based a gold price of US$1,234 per oz and antinomy price of US$5,650 per tonne and is calculated as follows:

Au Eq. (g/t) = (Au g/t) + (1.424 * Sb %)

- where 1.424 = (US$5,650 /100)/(US$1,234/31.1035)

Preliminary mining investigations indicate that grades of 3 g/t Au Equivalent within the Eleanora and Garibaldi Resource areas may have the potential to be economic in the medium term. Ore Reserve calculations shall be carried out on the Indicated Resources.

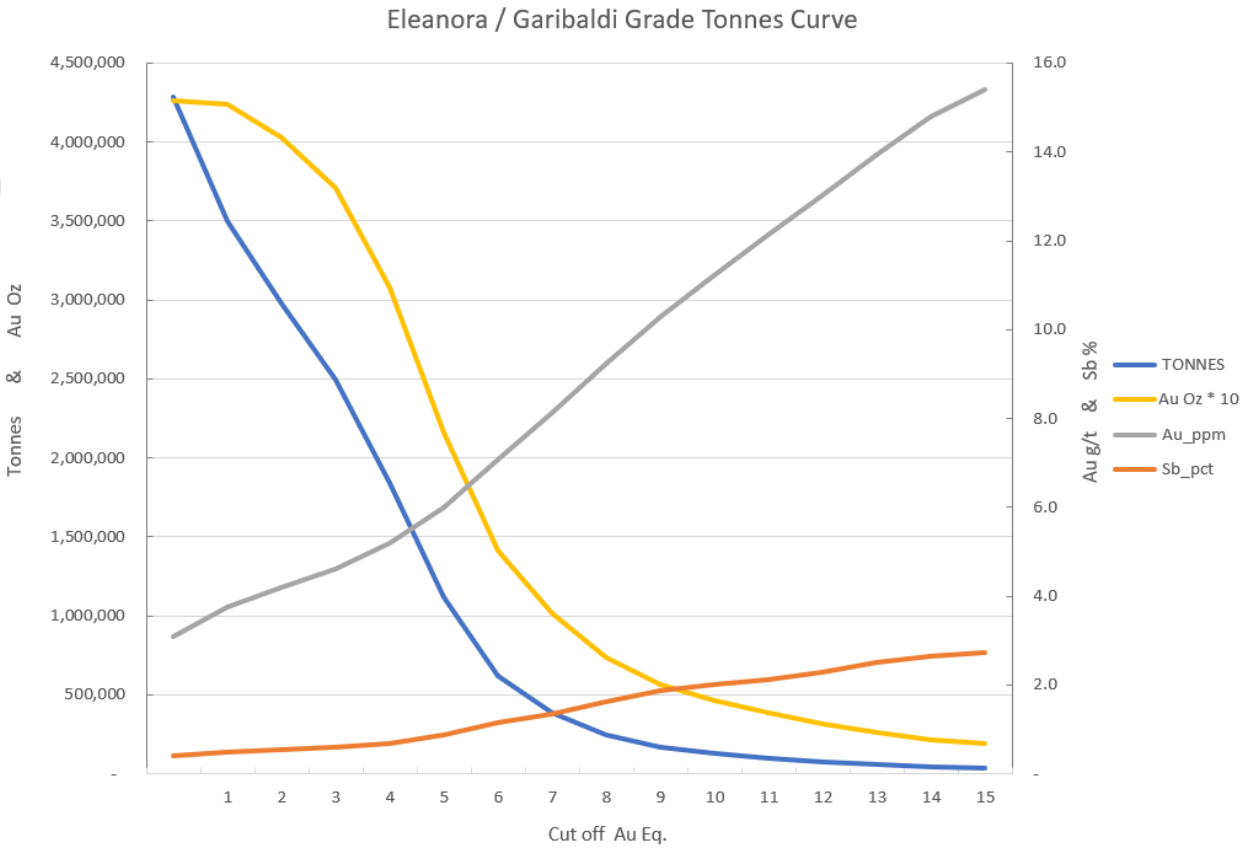

Figure 9: *Eleanora & Garibaldi Grade Tonnage Curve*

Recent and historical production demonstrates mine extraction is possible. A minimum mining width of 1.5m is expected. A minimum across strike contained metal content cut-off of 3-gram metres Au Eq. was applied to the Resource to ensures selected material would have sufficient grade and width to be potentially economic.

The degree of conversion of the Mineral Resource to Ore Reserve is unknown until mining studies are complete.

No recent metallurgical test work has been carried out on the Eleanora and Garibaldi mineralisation. Metallurgical test work on the Metz mining centre deposits (carried out in 2016 and 2017) and mill production data demonstrated total gravity & float recoveries of 91% Au and 86% Sb are achievable for material of a similar nature to Eleanora and Garibaldi mineralisation. The antimony recovery is applicable where Sb head grades are 1% or greater.

Competent Person's Statements

Eleanora and Garibaldi Mineral Resource

The information in this report that relates to the estimation and reporting of the Eleanora and Garibaldi Mineral Resource, in accordance with the JORC 2012 Code, is based on and fairly represents, information and supporting documentation compiled by Mr Peter Carolan who is a Member of The Australasian Institute of Mining and Metallurgy and a full-time employee of Red River Resources Ltd.

Mr Carolan has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr Carolan consents to the inclusion in the report of the matters based on the information in the form and context in which it appears. The information in this report that relates to database compilation, geological interpretation and mineralisation wireframing, project parameters and costs and overall supervision and direction of the Eleanora and Garibaldi estimation is based on and fairly represents, information and supporting documentation compiled under the overall supervision and direction of Mr Carolan.

Syndicate, Sunlight & Black lode Mineral Resources

The information in this report that relates to the reporting of the Syndicate, Sunlight & Black lode Mineral Resource Estimate reported in accordance with the JORC 2012 Code is based on and fairly represents, information and supporting documentation compiled by Mr Peter Carolan who is a Member of The Australasian Institute of Mining and Metallurgy and a full-time employee of Red River Resources Ltd.

Mr Carolan has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, 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 report and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements 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 from the original report.

Brackin's Spur, Clark's Gully Mineral Resources

The information in this report that relates to the reporting of the Brackin's Spur, Clark's Gully Mineral Resource Estimate reported in accordance with the JORC 2012 Code is based on and fairly represents, information and supporting documentation compiled by Rodney Webster who is a Member of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Webster is independent of Hillgrove Mines Pty Ltd. and an employee of AMC Consultants Pty Ltd. Mr Webster has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, 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 report and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements 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 from the original report.

2021 Gold Equivalent Calculation

It is Hillgrove Mines Pty Ltd opinion, based on previous mill production and sales, that all elements included in the metal equivalent calculation have a reasonable potential to be recovered in part and sold. The gold equivalent allows for a basic level of assessment and comparison of the varying deposits and mineralisation styles seen at Hillgrove. The gold equivalent (Au Eq.) is based a gold price of US$1,234 per oz and antinomy price of US$5,650 per tonne and is calculated as follows:

Au Eq. (g/t) = (Au g/t) + (1.424 * Sb %)

- where 1.424 = (US$5,650 /100)/(US$1,234/31.1035)

The gold equivalent was used as the cut off variable for the Eleanora / Garibaldi, Syndicate, Blacklode & Sunlight Mineral Resources. An earlier version of the gold equivalent was used as the cut off variable for the Brackin's Spur and Clarks Gully Mineral Resources as outlined in RVR release 3 July 2019.

Gold equivalent values have been calculated for the 2021 Hillgrove Gold Project Mineral Resources which are shown in Table 2.

About Red River Resources (ASX: RVR)

RVR is building a multi-asset operating business focused on base and precious metals with the objective of delivering prosperity through lean and clever resource development. RVR's foundation asset is the Thalanga Base Metal Operation in Northern Queensland, which was acquired in 2014 and where RVR commenced copper, lead and zinc concentrate production in September 2017. RVR commenced production at the high-grade Hillgrove Gold Operation in New South Wales in 2020, after acquiring it in 2019. The Hillgrove Operation is a key part of RVR's strategy to build a multi-asset operating business focused on base and precious metals.

On behalf of the Board,

Mel Palancian

Managing Director

Red River Resources Limited

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HILLGROVE MINERAL RESOURCE JORC 2012 TABLE 1

Section 1 Sampling Techniques and Data - JORC Code, 2012 Edition

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	The resource database contains the following sample types: • Surface costean samples • Diamond drillcore samples • Reverse circulation (RC) chip samples • Percussion chip samples • Underground channel samples • Surface channel samples and rock chip samples In general, the majority of samples within the mineralised zones were sampled between 0.2 and 2m intervals, based on geology, alteration, and mineralisation contacts. Early drilling does contain some narrower intervals and wider composite samples of 4m intervals were taken away from the main mineralised zones. Early reverse circulation drilling was undertaken with samples within the mineralised zones generally of 1m and external to the mineralised zones composites of 4m were taken. Underground channel sampling was undertaken by experienced geologists. Channel samples were sampled to geological/mineralisation contacts via rock chipping across development drive faces. The channels targeted the central high-grade antimony mineralisation and often do not sample the Au-As edge mineralisation. The channels were sampled perpendicular to the strike of the lode and spaced at 1.5m along strike. Individual samples were generally between 0.1 and 1m in length and 0.5 to 5 kg in size, they were crushed to minus 1cm and riffle split with 100g pulverised and a 10g portion collected for digestion and AAS analysis. Drilling program sample preparation and analysis from January 2007 to February 2021 were as follows: • Samples up to 3 kg were crushed to a nominal 6 mm, then pulverised to a nominal 75 µm. Samples (0.25 g) were digested and analysed by ICP with AES finish. Assays exceeding 10,000 ppm for arsenic; 10,000 ppm for antimony; or 500 ppm for tungsten were analysed by XRF. Samples weighing either 30 g or 50 g were assayed by fire assay. If coarse gold is identified visually in the sample, or if gold assay is greater

Criteria	JORC Code explanation	Commentary
		than 10 ppm, the sample is analysed by screen fire assay.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).*	• Prior to 2020 drilling techniques were percussion drilling, diamond drilling, and diamond drilling with RC pre-collars. Diamond drilling techniques only were used for the 2020/21 drilling program. • Drillcore sample data used for the grade estimation are from either whole-core or half-core samples from BQTK, LTK48, NQ2, or HQ3 size drillcore. • Core orientation marks were attempted using a spear and crayon in mineralised zones from January 2007 and 2008.
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.*	Drilling programs from January 2007 to February 2021: • Intervals of core loss were logged using a qualitative code and recorded in the acQuire database. Core recovery was measured, recorded on a digital device, and transferred to the acQuire database. • Drilling techniques were changed when drilling through highly fractured rock or gouge zones. Drilling muds were increased; water pressure was reduced and the weight on the bit was reduced. This change in technique decreased the likelihood of core loss. • Drillcore photos, and geotechnical logs have been reviewed for each of the projects. • Core loss/core recovery and void measurements recorded on hard copies were transferred to the acQuire database and stored in the Lithology table as Core Loss or Void. For intervals with no core loss logged or stated core recovery measurements, it is not clear if there was no core loss for these intervals or if the information wasn't collected. • No bias is evident due to preferential loss of fines or sample recovery.
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.*	Drilling programs from January 2007: • Lithology, weathering, mineralisation, veining, alteration, and structure were logged. • Core recovery and RQD were logged (quantitatively). • In-situ bulk density measurements were recorded for most mineralisation intersections. • Drillcore photos are available. Drilling programs prior to January 2007: • Lithology, weathering, mineralisation, veining, alteration and structure were logged. • Some core loss intervals have been logged

Criteria	JORC Code explanation	Commentary
		qualitatively, and some core recovery intervals have been logged quantitatively. • There is sufficient logging to support mineral resource estimates, and mining studies. • A geotechnical study by a qualified person is recommended. • RQD logging data is available, and mineralisation is exposed in underground workings. The logging is sufficient to support metallurgical testwork.
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.*	Drilling programs from 2007: • Samples up to 3kg were crushed to a nominal 85% passing 75µm. • Sample intervals were adjusted within mineralisation to correspond with a change in mineralisation style, or by observed changes in concentration of minerals of economic interest. • Duplicate samples were collected following the coarse crush (up to 3kg) and following the pulverisation at a rate of 5%. Duplicate samples of pulverised material from the 2007/8 sampling were sent to an umpire laboratory at a rate of approximately 5% for the mineralised zones. Drilling programs prior to January 2007: • There is limited available documentation for the sample preparation methods and QAQC procedures. NEAM Channel Sampling between 1988 and 2000 was carried out by experienced geologists. 0.5 to 5kg samples were taken using rock chipping methods. These were crushed to minus 1cm and riffle split to obtain two 100-gram samples. One sample was stored for check assaying and one was pulverised in ring mill and a 10g portion provided for onsite AAS analysis.
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	For drilling post 2007: • The laboratory procedures and assaying are appropriate, and the laboratory is NATA certified. The analytical methods are considered total for the elements of interest. • Standards, blanks, duplicates and umpire assays have been used and levels of accuracy, precision and bias have been established for different drill programs. No indication of any overall material bias has been established. • For Channel Sampling. Although the actual QAQC data has not been reviewed conclusions from company records state that: • Periodically random duplicate crush splits were

Criteria	JORC Code explanation	Commentary
		check assayed with conclusion of no systematic assay bias. High gold assays also had their duplicate assayed. • Umpire samples were sent to an offsite lab for fire assay and XRF/AAS. No systematic bias other than the onsite lab under calling due to incomplete digestion of gold in arsenopyrite gold. Historic mine production at different times indicate that up to 15% overcall on antimony grades for estimates based on channel sample data may occur. The levels of accuracy, precision and bias achieved for various programs and any lack of QAQC has been taken into consideration during the estimation process and when assigning Resource Classifications.
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.*	• The Competent Person visited Hillgrove in March and September 2019 and inspected mineralised drillcore and checked the database. • All drilling in the 2020/2021 program was undertaken within the previously reported Mineral Resource area with the intention of verifying the earlier results. • Adjacently drilled holes from different programs/drilling methods were assessed for interval thickness and grade variance. • The data is stored in an acQuire database which is routinely backed up. Database backups are securely stored offsite. Standard data entry objects are set up within the database for importing data, and documented procedures for data entry are available. A spreadsheet contains documentation for the validation of the historical and recent drillhole data. • Assay data is not adjusted.
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.*	• Drillhole collars were surveyed and down-hole surveys are taken using appropriate tools. • For historic data, some information has been digitized from plans and sections. This is recorded in the acQuire database and a "hole confidence" value indicates the quantitative assessment of the quality of the survey. • Historic Eleanora stopes and ore drive locations have been estimated from plans and sections. • The Grid system is AGD66. Recent Lidar survey of topography was completed for the Eleanora and Garibaldi areas.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is*	• Eleanora drillhole intercepts are spaced at 60 m x 60m out to 80 m x 80 m. • Garibaldi drillhole intercepts are spaced at 30

Criteria	JORC Code explanation	Commentary
	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.*	m x 30m out to 80 m x 80 m. • Sections of the Eleanora Resource are based on Level channel sample data, these samples are on a nominal 1.5 m spacing along ore drives and vertically 35 to 50 m between Levels. In stope channel samples between Levels were not used in the estimation process. • This distribution confirms a degree of geological continuity within the mineralised system such that Mineral Resource Estimation and the assigned classifications are appropriate.
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.*	• The drillholes were drilled at varying angles to intersect the steeply dipping mineralisation at the best possible angle given the available locations for drill sites. • The drillhole locations, and orientations relative to the mineralisation are considered satisfactory. Intersection angles have been taken into consideration during the estimation process.
Sample security	• *The measures taken to ensure sample security.*	• Samples are transported to the laboratory on a regular basis. Residual coarse rejects and pulps are returned to site and stored in a secure core-shed, or in a container located in an area which requires authorisation to gain access.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An Independent Technical Valuation report prepared by Coffey Mining for Emu Nickel NL in 2012 noted that the quality of the NEAM face sampling data may have issues (unspecified), and that there was a lack of historical QAQC data. • An Independent Technical Review prepared by Snowden for Bracken Resources in 2014 noted that the data collection practices met industry standards and are appropriate for use in Mineral Resource estimation. The data obtained by NEAM should be confirmed through re-sampling where possible and submitting standards, blanks, and duplicates as per HGM's QAQC program. • Review of QAQC data for sampling between 2004 and 2008 indicates fair performance of Au duplicates and poor performance of Sb duplicates, this has been incorporated into the confidence classification for the Resource.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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 Hillgrove operations are covered by 51 tenements (4 Exploration Leases, 33 Mining Leases, 6 Private Land Leases, 3 Gold Leases and 5 Mining Purpose Leases). There are no impediments to the tenements which are 100% owned by Hillgrove Mines. • All tenements are currently in good standing. • The Exploration Leases are in good standing. • There are no Joint venture agreements relevant to the area of interest
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• There have been numerous exploration programs conducted by various companies at Hillgrove. Where possible available data has been reviewed and incorporated into the onsite database. Hillgrove Mines has no reason to doubt the accuracy of any of the previous work conducted on the site.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Hillgrove mineralisation can be classified as orogenic style, antimony – gold deposits, that are hosted in a combination of the Mid Carboniferous Girrakool Sediments and Late Carboniferous – Early Permian Granites. The setting is part of the New England Orogen, one of four which formed most of the east coast of Australia. The mineralised zones are structurally controlled within a NW trending shear corridor, formed from the movement of two regional faults (Hillgrove and Chandler). Multi-phase antimony – gold – tungsten mineralisation has been hydrothermally emplaced into narrow shears (0.1 m – 10 m wide), which have good strike and depth extents. Gold mineralisation is predominantly refractory (associated with arsenopyrite), and also occurs as aurostibite in stibnite, and as particle 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*
	  ○ *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*
		• Drillhole collar coordinates and elevation have been accurately surveyed by a qualified surveyor.
		• Dip and azimuth of the drillholes have been recorded using a conventional downhole camera. A limited number of holes were also checked with a downhole gyrometer, with no significant difference from the downhole camera.
		• Hole length and downhole intervals have been recorded using the standard practice of drill rod lengths and checked by geological staff.

Criteria	JORC Code explanation	Commentary
	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 (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Past exploration results have been reported based on historic economic requirements for a standalone deposit at Hillgrove. • Intercepts that have been bulked over multiple intervals use weighted averaging techniques to report the grades. • During the estimation process top-capping was applied to anomalous high grades.
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 (e.g. 'down hole length, true width not known').*	• All drillholes were designed to intersect the mineralised zones as close to true width as possible. • When assessing drillhole intercepts the dip and strike of the mineralised zones has been taken into consideration. • Drillholes with less than ideal intersection angles were identified and accommodated in the estimation process.
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.*	• No exploration results 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.*	• No exploration results 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; potential deleterious or contaminating substances*.	• A Helimag airborne geophysical survey was flown over the Hillgrove tenements in 2007. Several exploration targets were generated from the resulting images. • A Lidar survey was completed in 2017 over the Bakers Creek Gorge to provide 1m contours for topographic control and aerial photos for exploration.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main*	• Work is ongoing at Hillgrove, including exploration and the restart study. • Resource definition at the Metz Mine area will commence in due course. Additional drilling and or development sampling is required to

Criteria	JORC Code explanation	Commentary
	geological interpretations and future drilling areas, provided this information is not commercially sensitive.	establish Measured Resources at Eleanora and Garibaldi.

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.*	• Procedures are available for loading data in the database and standard database import and export objects are used to upload and download data. • The validation of collar and downhole survey, analytical method, and QAQC data is recorded in spreadsheets.
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.*	• The Competent Person visited the site in March and September 2019 and reviewed the sampling, analytical methods, QAQC, procedures, and the database.
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.*	• The geological interpretation has a good level of confidence. For areas where the level of confidence is uncertain due to lack of data or geological complexity this has been taken into consideration when assigning the resource classification to the estimates. • The mineralisation is hosted within steep shear and breccia structures. Continuity of these structures is significant as defined through the mine workings and drilling. Higher grade mineralisation is seen to occur on the structures within plunging shoots. The definition is well understood where development exposure and channel sampling exist. Lower grade gold-quartz-arsenopyrite, veining and halo mineralisation surrounds structures to varying widths.
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.*	• The Eleanora / Garibaldi mineralised system is defined over 1.3km along strike to 800 m below surface. The Resource is currently limited to 500 m below surface. The width of the mineralisation is generally between 0.3 to 6 m. A lamprophyre dyke of generally around 1m width has intruded along the mineralised structure and often divides the mineralisation into parallel lodes. • Although the mineralisation is generally strongest on the main structure; splays, parallel structures and network veining host hanging wall and footwall mineralisation. • In the south, in the Garibaldi area an additional

Criteria	JORC Code explanation	Commentary
		two parallel lodes are defined in the east wall. Of these lodes the eastern lodes become more dominant towards the south. In this area the resource is limited to 300m depth due to the current depth extent of the drilling.
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 (e.g. 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.*	• CAE Studio (Datamine) software was used for domain creation, block model construction and grade estimation. Snowden Supervisor software was used for statistical analysis and to develop model parameters. • Domains controlling the resource are based on geology and intensity of mineralisation where the presence of quartz-arsenopyrite veining +/- quartz-breccias and/or the presence of stibnite occurring as massive or in veins indicates lode mineralisation. The difference in channel and drillhole sample selectivity was noted and considered during the estimation process. • In total 7 domains in the Eleanora area and 3 in the Garibaldi area were estimated. An unconstrained estimate of hanging wall and footwall material was undertaken. • Sample compositing within domains to approximate 0.5 m true width was undertaken. • Anomalously high gold and antimony grade values were top-capped. • The use of different sample types (channel and drill hole) was taken into account during the estimation and classification process. De-clustering of channel sampling was applied. Limits to the extent of influence from channel samples was applied. • Where sufficient data, variography on individual domains was used to develop model estimation parameters. For domains with less data, model parameters were shared from more well-defined domains. • A 3D blockmodel rotated to approximate strike of the system was developed, block size of 5 x 2.5 x 5 was considered appropriate for the closest spaced data. • Estimation of gold and antimony grades was carried out using ordinary kriging and inverse distance squared methods. • Multiple estimation passes were used with increasing search ellipses. • Historical Mine production showing a high antimony bias from channel samples was taken into account. • Digitised historical records of underground stoping was used to exclude mined out material from the model.

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		• No allowance is made for the recovery of by-products. • Underground mining methods assume a selective approach to limit dilution however the actual dimensions are not assumed in the resource models. • The correlation between bulk density and antimony is used. • Model validation was conducted by visually checking drillhole grades to block grades in plan and section view, and by reviewing. • Full width domain intervals were checked against local block model grades. • Full width domain intervals were checked against domain thickness, for conservation of volume.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Moisture content is not currently taken into consideration.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The gold equivalent cut-off is based on a gold price of of $US1,234 per ounce and antimony price of $US5650 per tonne. • The gold equivalent equation is: • AuEq = Au_ppm + ((5650/100) / (1234/31.1035)) * Sb_pct • Previous mill production demonstrates both antimony and gold can be recovered and sold, and that the stated recoveries are achievable. • Total gravity/float recoveries of 91 % gold and 86 % antimony. • The use of 3 g/t Au equivalent cut-off is appropriate given current mining studies show the Mineral Resources at Sunlight and Blacklode are potentially economic at a 3 g/t Au equivalent. • No minimum lode thickness constraints have been placed upon the Resource.
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.*	• Mining methods are assumed to be underground long hole stoping techniques on a 20m level spacing. • Mining assumptions are based on historical site costs. • Minimum mining widths of 1.5m are expected. • Grade of material outside of the mineralised domains has not been estimated.

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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 testwork and production data through the Hillgrove mill, shows that total gravity / float recoveries of 91% Au and 86% Sb are achievable. • This antimony recovery is applicable where Sb head grades are 1% or greater.
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.*	• No environmental impediments impact on the operations.
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 measured by the water displacement method using buoyancy for drillcore samples from 2005. • A regression between bulk density and estimated antimony grade was developed. • Density was written to the Resource Model using estimated antimony grade and the regression formula.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. 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.*	The Mineral Resources have been classified according to the confidence in sample data, sample spacing and confidence in the modelled continuity of both the thickness and grade of the mineralized material. Indicated and Inferred blocks have been reported. The resource classification is deemed appropriate in relation to the drill spacing and geological continuity of the mineralized domains, recovery, sample spacing and QAQC results. The classification appropriately reflects the

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		Competent Persons confidence of the estimate of the ore body. • Indicated areas are sampled either through development and channel sampling or diamond drilling generally at 30 m spacing out to an 80 m spacing. • Inferred areas are extensions beyond Indicated areas and are drilled out to a 100m drill hole spacing. Extrapolation beyond drill holes is limited to generally 60m. • The previous JORC 2004 Resource at Eleanora classified an area as Measured. It is now considered that the quantification of tonnage and grade in this area should be considered as Indicated. This is due to the lack of QAQC documentation, and the possibility of unquantified sample bias being introduced during channel sampling which lowers the confidence level of the estimate. For this reason, the area has been classified as Indicated.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• An Independent Technical Valuation report prepared by Coffey Mining for Emu Nickel NL in 2012 noted that the quality of the NEAM face sampling data may have issues (unspecified), and that there was a lack of historical QAQC data. • An Independent Technical Review prepared by Snowden for Bracken Resources in 2014 noted that the data collection practices met industry standards and are appropriate for use in Mineral Resource estimation. The data obtained by NEAM should be confirmed through re-sampling where possible and submitting standards, blanks, and duplicates as per HGM's QAQC program.
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.*	• The Competent Person considers the global and local estimated tonnes and grade to be of a reasonable accuracy suitable for mine planning. Previous mining and the use of channel samples to estimate the resource adds to the confidence of the estimate. Appropriate estimation techniques and parameters have been used. The Mineral Resource classification is appropriate based on the drilling density, surveying method, sampling and QAQC results.

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	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	