11 July 2024



# **Exploration Drilling Commences at Hillgrove**

## Highlights

- 5,250m RC drilling program to infill Resource and test extensions of the Clarks Gully deposit
- Clarks Gully mineralisation currently defined from surface to a depth of 200m with a current M&I Mineral Resource of 266kt @ 3.8% Sb and 2.0g/t Au (8.40 g/t AuEq)
- Large, untested geochemical anomaly directly south also to be drilled
- Amenable to open pit and underground mining target for early stage development
- Best intercepts to date include:
  - 7m @ 2.33 g/t Au, 9.16% Sb (23.23 g/t AuEq)¹ (30.82 g/t AuEq)²
  - 15m @ 1.61 g/t Au, 5.18% Sb (13.43 g/t AuEq)<sup>1</sup> (17.73 g/t AuEq)<sup>2</sup>
  - 16m @ 1.52 g/t Au, 3.41% Sb (9.30 g/t AuEq)<sup>1</sup> (12.12 g/t AuEq)<sup>2</sup>
  - 16m @ 2.20 g/t Au, 4.89% Sb (13.36 g/t AuEq)¹ (17.42 g/t AuEq)²
  - 6.5m @ 1.60 g/t Au, 8.10% Sb (20.08 g/t AuEq)¹ (26.80 g/t AuEq)²
  - 15.8m @ 1.38 g/t Au, 3.44% Sb (9.23 g/t AuEq)¹ (12.09 g/t AuEq)²

All significant drill intercepts are contained in (Appendix – Table 2)

Larvotto Resources Limited (**ASX: LRV**, **Germany: K6X**, '**Larvotto**' or 'the **Company**') today announced it will commence exploration drilling at Hillgrove, following a successful \$5M equity raising with the potential for a further \$1M via a share purchase plan (SPP).

The Clarks Gully deposit is a steep dipping zone of mineralisation (Figures 3, 4) associated with both high-grade gold and antimony that remains open in all directions, particularly at depth.

The drill program will extend previous drilling to test the strike and depth extent of the mineralised zone and infill the defined resource to ~20m spacing, which will increase confidence ahead of Ore Reserve estimation studies.

Larvotto's exploration strategy is to rapidly increase the Hillgrove Resource base, while converting the current Measured and Indicated (M+I) Mineral Resource Estimate (MRE) into JORC Ore Reserves.

The initial program commences with 5,250m of reverse circulation (RC) drilling at Clarks Gully which was previously mined via a small open cut visible in Figure 2. The Company plans to undertake a further diamond drilling program targeting the high-grade gold zone at Bakers Creek once the Clarks Gully drilling is underway. Previous drilling at Bakers Creek produced exceptional gold intersections (ASX Release May 8, 2024. High Grade Gold Results at Hillgrove).

<sup>&</sup>lt;sup>1</sup> Value calculated by using \$15,000/tonne Sb.

<sup>&</sup>lt;sup>2</sup> Calculated by using current Spot price of US\$22,000/tonne Sb to highlight project potential upside. Equivalent grades are based on the Gold Equivalent Calculation detailed on page 6.

### Managing Director, Ron Heeks commented,

"The Clarks Gully deposit extends from surface and remains open at depth. It currently has a M+I Mineral Resource Estimate (MRE) with high-grade ore suited to both open pit and underground extraction. Favourably, it has potential for early-stage development which could supplement production from the already developed Metz underground mining area to the south. Significantly, the mineralisation is open in all directions and there is great potential for it to extend to depth as all of the other deposits in the field do.

Soil geochemistry strongly indicates that the mineralisation extends to the south of the previously mined open pit (Figure 2) and initial testing of the area is included as part of this program. The geochemical anomaly is of the same order as that over the current deposit and has the potential to significantly increase the overall resource at Clarks Gully.

We look forward to demonstrating the current mineralisation extends in all directions and continues to contain significant mineralisation.

### Antimony – a critical mineral

The antimony price has increased dramatically since Larvotto's involvement in Hillgrove due to the use of the critical mineral in solar panel production, where it provides a significant improvement in panel efficiency. The current price has doubled to ~US\$22,000 over the period that Larvotto has been involved at Hillgrove. In the "Significant Intersections" table on page 1 the effect of using the current spot price of \$US22,000 on the AuEq grade calculation clearly demonstrates the benefit of antimony to the project.

### Hillgrove Mines

Hillgrove Mines is currently a 254km² project consisting of four exploration leases and 48 granted mining leases with a defined Mineral Resource containing 1.4Moz Resources at 6.1g/t AuEq¹ (Figure 1) The current Mineral Resource places Hillgrove in the world top 10 global antimony deposits and is Australia's largest antimony deposit, as well as containing high-grade gold. The field also contains largely untested tungsten mineralisation that has always been mined with the gold and antimony, but never extracted in the process plant. Antimony and tungsten are considered critical minerals by multiple countries including the US, EU, China, and Australia. The Hillgrove mineral field is strategically located adjacent to existing road infrastructure and within close proximity to the urban centres of Armidale (23km), Tamworth (145km) and Coffs Harbour (170km). The area has been an active mining centre for over 100 years and has the benefit of offering a residential operation. Historically, the Hillgrove field has produced over 750,000oz of gold and 40,000t of antimony and there are currently multiple high-grade drill targets outside of the current Mineral Resources which have been identified for further near-term drilling including Bakers Creek.

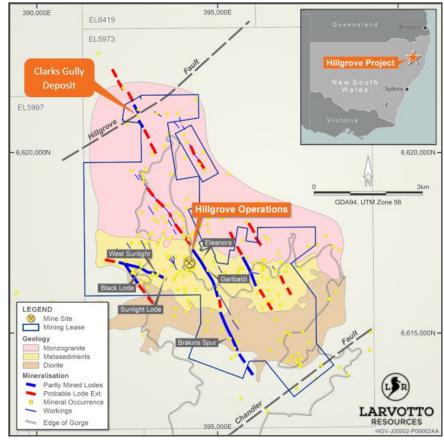


Figure 1 Location Plan of Hillgrove Project

### Clarks Gully

Clarks Gully is located 4.7km NNW of the Hillgrove processing plant (Figure 2), where the mineralised trend, hosting the Eleanora-Garibaldi and Brackins Spur deposits, intersects the regional Hillgrove Fault. It is part of the wider Hillgrove mineral field which has a JORC 2012 Mineral Resource of 1.4Moz @ 6.1g/t AuEq.

The Clarks Gully Mineral Resource of 266kt @ 3.8% Sb and 2.0g/t Au at 8.40g/t AuEq, for 17,000Oz Au and 10,000 tonnes of Sb, is defined from surface and has not been exploited by previous mining, except for a small open pit which extracted antimony and gold ore in 1980.

Typical of other lodes at Hillgrove and being located high in the mineralised profile, atop the plateau, Clarks Gully is antimony dominant mineralisation. This varies from deeper mineralisation that tends to become gold dominant as is evident in deposits such as Bakers Creek, which is located at the bottom of the gorge, approximately 450 m below. (ASX Release May 8, 2024. High Grade Gold Results at Hillgrove).

Clarks Gully was drilled in 1990 with shallow drill holes which identified a small resource. During 2005 and 2015-16 additional rounds of drilling took place to produce the current resource.

Structurally bound on the predominant NNW orientation, the Clarks Gully resource is interpreted to be the northern extension of the main Elanora-Garibaldi line of reefs. The structure is hosted within the large dominant Monzogranite known to dominate the northern areas of Hillgrove.



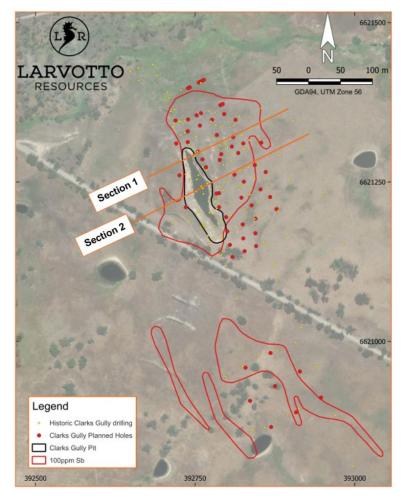


Figure 2 Plan view of proposed drilling and antimony geochemical anomaly for Clarks Gully

### Larvotto Drilling at Clarks Gully

Clarks Gully has a Mineral Resource which was defined by previous drilling programs (see ASX announcement on 22 December 2023). Located on Hillgrove Station (freehold property owned by Hillgrove Mines) it has the potential for early development of an additional production source which could supplement mining from the developed Metz mining area further south.

Larvotto's drill program has been planned to undertake:

- Infill of the defined resource to approximately 20m spacing, to increase confidence in the defined resource and fully define the weathering profile ahead of Mineral Reserve Estimation (MRE) studies; and
- Test extensions to the defined resource in all directions, particularly depth determine the limit of any potential open pit development.
- Test the geochemical anomaly to the south of the current resource.

Figures 3 and 4 display the simple nature of the mineralisation which is hosted in Monzogranite and has a steep eastly dip. The mineralisation is typically consistent and is open at depth. The main westerly lode hosts the majority of the mineralisation and as is common in the upper portions of the zone has the benefit of higher antimony grades.

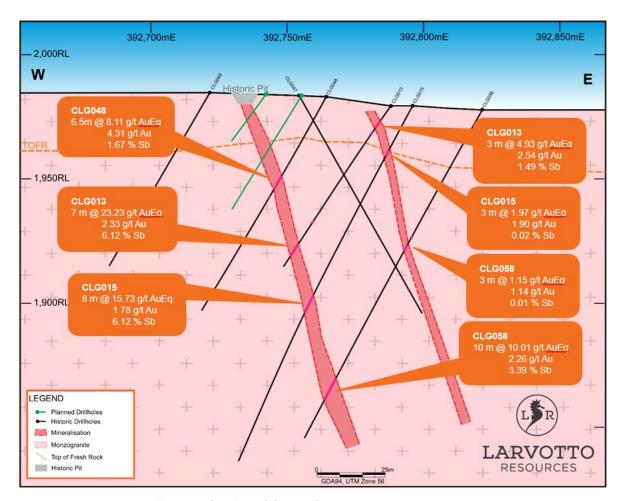


Figure 3 Section of Clarks Gully and previous Drilling

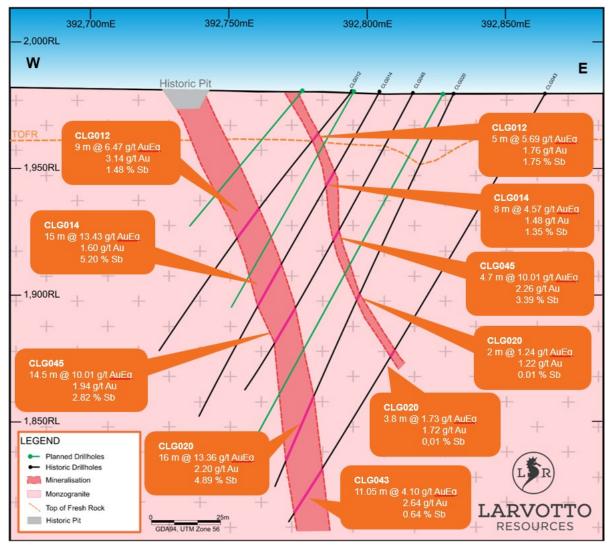


Figure 4 Section 2 of Clarks Gully and previous Drilling

## **Gold Equivalent Calculation**

Both gold and antimony that are included in the gold equivalent calculation ("AuEq") are recovered at Hillgrove. LRV released a JORC Resource using the following AuEq calculation:

$$AuEq (g/t) = (Au (g/t) + Sb (%)) \times 1.88$$

All reference to the Mineral Resource uses the above equation to calculate the gold equivalent of the contained resource, as defined in the current Mineral Resource Estimate, as reported in December 2023.

Changes to the antimony and gold spot prices since the release of the current Mineral Resource have necessitated a new calculation of AuEq. Within this release and with the exception of the MRE gold equivalent values are calculated with the following equations.

$$AuEq (g/t) = (Au (g/t) + Sb(\%)) \times ((Sb (\$/t) \times Sb (rec\%)) / ((Au (\$/oz)/31.1035) \times Au (rec\%)))$$
  
 $AuEq (g/t) = (Au (g/t) + Sb (\%)) \times 2.281$ 

Using the following assumptions:

Au Price = US\$ 2,200 /oz (currently US\$2,320)



- Sb Price = US\$ 15,000 /t (currently US\$22,000)
- US\$: A\$ = 0.67
- Au recovery = 83.6% (based on conservative historic recovery from Hillgrove)
- Sb recovery = 89.6% (based on conservative historic recovery from Hillgrove)

#### Mineral Resource Estimate

Table 1 Hillgrove Gold Project Mineral Resource

Classification	Tonnes (kt)	Au Grade (g/t)	Sb Grade %	AuEq Grade (g/t)	Cont. Au (koz)	Cont. Sb (kt)	Cont. AuEq (koz)
Measured	442	3.6	3.8	9.4	51	17	134
Indicated	3,766	4.8	1.3	6.5	581	49	784
Measured & Indicated	4,208	4.7	1.6	6.8	632	66	919
Inferred	3,017	4.2	0.8	5.1	404	24	497
Total	7,226	4.5	1.2	6.1	1,036	90	1,415

#### Notes:

Mineral Resource estimate based on 3g/t & 5g/t AuEq cut-off grades

Gold equivalent calculation methodology:

Resources throughout this presentation include gold equivalent calculations that combine Gold (Au) grades in grams/tonnes and Antimony (Sb) in percentages (%). Both gold and antimony are mined and processed using the same methodology and an Antimony/Gold and Gold/Antimony concentrate is produced.

Calculation metrics as at (17 Jan 23)

- Gold price: US \$1,911 | Antimony price: US\$11,650/t | Au recovery 91% | Sb recovery 86%
- Au Eq. (g/t) = (Au g/t \* 91%) + (1.88 \* Sb% \* 86%) where 1.88 = (Sb price/100) /(Au price/31.1035)

Based on metallurgical studies and prior mill performance, LRV expect that all metals contained within the equivalent calculation can be recovered at the predicted rates.

## **Cautionary Statement**

The potential quantity and grade of the Exploration Targets outlined above are conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

## **Reporting Confirmation**

The information in this report that relates to exploration results is extracted from the Company's ASX announcements:

ASX: LRV release titled "Amended 1.4Moz @ 6.1g/t AuEq Hillgrove Project Acquired" dated 19
 December 2023

The Company confirms that it is not aware of any new information or data that materially affects the information included with the original market announcement.

This announcement was authorised for release by the Board of Larvotto Resources Limited.



### **Competent Persons Statement**

The information in this Announcement that relates to exploration targets and exploration results is based on information compiled by Mr Ron Heeks, who is a Member of the Australasian Institute of Mining and Metallurgy and who is Managing Director of Larvotto Resources Limited.

Mr Heeks has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Heeks consents to the inclusion in the release of the matters based on his information in the form and context in which it appears. The Company is not aware of any new information or data that materially affects the information included in this Announcement. All material assumptions and technical parameters underpinning the estimates in the Announcements referred to, continue to apply and have not materially changed.

#### About Larvotto Resources Ltd

Larvotto Resources Limited (ASX:LRV) is actively advancing its portfolio of in-demand minerals projects including the 1.4Moz AuEq high-grade Hillgrove Gold-Antimony Project in NSW, the large Mt Isa copper, gold, and cobalt project adjacent to Mt Isa townsite in Queensland, the Eyre multi-metals and lithium project located 30km east of Norseman in Western Australia and an exciting gold exploration project at Ohakuri in New Zealand's North Island. Larvotto's board has a mix of experienced explorers, miners and corporate financiers.

### Forward Looking Statements

Any forward-looking information contained in this news release is made as of the date of this news release. Except as required under applicable securities legislation, Larvotto does not intend, and does not assume any obligation, to update this forward-looking information. Any forward-looking information contained in this news release is based on numerous assumptions and is subject to all of the risks and uncertainties inherent in the Company's business, including risks inherent in resource exploration and development. As a result, actual results may vary materially from those described in the forward-looking information. Readers are cautioned not to place undue reliance on forward looking information due to the inherent uncertainty thereof.

Visit www.larvottoresources.com for further information.



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## Appendix A: Prospect Exploration Target Calculations

Table 1: Exploration Target Summary, Hillgrove Mines

Prospect		Tonnes (t)	AuEq g/t*	Au g/t	Sb %	Au Eq (oz)	Au (oz)	Sb (kt)
Eleanora-	Upper Case	1,714,314	6.25	5.36	0.39	344,432	269,023	665
Garibaldi	Lower Case	1,432,217	5.78	4.93	0.37	266,069	206,551	533
Syndicate	Upper Case	289,701	15.65	4.59	4.85	145,730	38,887	1,404
(METZ)	Lower Case	262,178	11.94	3.43	3.73	100,668	26,309	978
Black Lode-	Upper Case	1,551,242	11.86	5.28	2.88	591,558	239,803	4,473
Syndicate (METZ)	Lower Case	1,118,642	8.44	4.38	1.78	303,488	143,424	1,989
TOTAL	Upper Case (weighted)	3,555,257	9.46	5.27	1.84	1,081,720	547,713	6,543
	Lower Case (weighted)	2,813,036	7.41	4.57	1.24	670,226	376,284	3,501

Table 2: Drillhole Significant Intercepts, Clarks Gully

Hole ID	From	То	Interval	g/t Au	% Sb	AuEq (2.281)
CLG011	32	37	5	0.00	0.00	0.01
CLG012	21	26	5	1.71	1.75	5.69
CLG012	61	70	9	3.14	1.46	6.47
CLG013	7	10	3	2.54	1.49	5.94
CLG013	68	75	7	2.33	9.16	23.23
CLG014	36	44	8	1.48	1.35	4.57
CLG014	83	98	15	1.61	5.18	13.43
CLG015	20	23	3	1.91	0.02	1.97
CLG015	85	93	8	1.78	6.12	15.73
CLG016	43	60	17	0.20	0.00	0.21
CLG016	63	67	4	1.65	0.01	1.67
including	64	65	1	2.15	0.02	2.20



CLG017	85	101	16	1.52	3.41	9.30
CLG018	80	82	2	0.32	0.19	0.76
CLG018	154	168	14	3.92	0.03	3.99
including	154	155	1	7.91	0.22	8.41
CLG019	65	67	2	0.84	0.00	0.84
CLG019	142	149	7	1.31	3.58	9.49
CLG020	85	96	11	0.50	0.01	0.52
CLG020	135	151	16	2.20	4.89	13.36
including	138	149	11	2.47	6.88	18.16
CLG021	99	113	14	0.97	0.09	1.18
CLG021	141	150	9	2.65	0.18	3.07
including	144	146	2	5.70	0.52	6.89
CLG022	93	106	13	0.86	0.27	1.48
CLG023	137	153	16	1.98	0.03	2.05
CLG025	146	153	7	0.11	0.01	0.12
CLG026	111	121	10	0.84	0.01	0.85
CLG028	124	126	2	0.78	0.00	0.79
CLG028	204.5	213.5	9	0.99	0.30	1.68
CLG031	171	174.5	3.5	1.71	0.09	1.92
CLG031	262.8	273	10.2	1.39	0.04	1.47
CLG032	254.66	265	10.34	2.11	0.07	2.27
CLG033	18	19	1	1.04	0.01	1.07
CLG033	105	120	15	0.86	0.10	1.08
including	116	118	2	1.81	0.51	2.96
CLG035	128	135	7	0.41	0.31	1.13
CLG038	106	108	2	0.64	0.01	0.65
CLG039	18.4	24	5.6	1.91	0.02	1.96
CLG039	78	84.5	6.5	1.60	8.10	20.08
including	81	84.5	3.5	1.89	14.85	35.77
CLG040	251	262.1	11.1	2.39	1.27	5.29
CLG041	231	232	1	1.13	0.05	1.25
CLG042	130	137.8	7.8	0.51	0.01	0.52
CLG042	179	181.5	2.5	1.68	0.01	1.71
including	180	181	1	1.60	0.01	1.62
CLG043	118	121.8	3.8	1.72	0.01	1.73



CLG043	179.55	190.6	11.05	2.64	0.64	4.10
including	180.65	186	5.35	3.18	1.13	5.76
CLG044	28.7	37.5	8.8	1.81	0.01	1.82
including	34.4	34.9	0.5	4.18	0.01	4.21
CLG045	64.5	69.2	4.7	1.56	0.52	2.75
CLG045	99.5	114	14.5	1.94	2.82	8.37
including	100	111.5	11.5	2.09	3.47	10.00
CLG047	89.4	89.8	0.4	1.84	2.49	7.52
CLG048	36.5	43	6.5	4.31	1.67	8.11
including	36.5	42.3	5.8	4.49	1.86	8.73
CLG049	32.5	60.12	27.62	2.14	1.02	4.47
including	34	47	13	3.21	1.96	7.67
CLG052	79.1	95.1	16	0.91	0.01	0.92
CLG053	28.9	43	14.1	1.47	0.03	1.53
CLG054	24	42	18	0.72	0.01	0.73
CLG054	48.7	51	2.3	1.47	0.01	1.48
including	49.1	49.9	0.8	1.79	0.01	1.81
CLG055	16	20.7	4.7	1.61	4.25	11.32
CLG055	40	54	14	0.46	0.01	0.48
including	44.3	45.1	0.8	0.85	0.02	0.89
CLG056	78.6	81	2.4	0.31	0.00	0.32
CLG056	92.3	104.1	11.8	1.12	0.07	1.29
including	92.3	94	1.7	1.60	0.42	2.56
CLG057	61	64	3	0.81	0.01	0.83
CLG057	83	89.7	6.7	1.65	2.13	6.51
CLG058	62	65	3	1.14	0.01	1.15
CLG058	123	133	10	2.26	3.39	10.01
including	123.6	132.5	8.9	2.47	3.80	11.14
CLG059	26.2	42	15.8	1.38	3.44	9.23
including	26.2	36.7	10.5	1.67	5.11	13.33
CLG060	21.6	35	13.4	1.34	0.80	3.17
including	22	34	12	1.40	0.90	3.45
CLG061	74.9	83.1	8.2	1.74	0.05	1.86
including	79	82.6	3.6	1.70	0.09	1.91
CLG062	15.8	20.7	4.9	0.41	0.01	0.44



including	20	20.7	0.7	0.75	0.01	0.77
CLG063	40.6	46.4	5.8	1.95	0.37	2.78
including	41.9	46.4	4.5	2.42	0.46	3.46
CLG065	47.85	54	6.15	0.84	0.28	1.49
CLG066	24.9	32	7.1	2.53	0.23	3.05
CLG066	79	85.3	6.3	1.55	7.56	18.78
CLG067	63.95	66	2.05	0.28	0.00	0.29
CLG067	119.1	131.55	12.45	1.93	1.08	4.40
CLG068	27.5	28.5	1	0.60	0.01	0.61
CLG068	60.5	62.8	2.3	0.49	0.01	0.50
including	61.9	62.8	0.9	0.51	0.01	0.53
CLG069	67.2	69.5	2.3	1.74	0.27	2.35
CLG069	107.85	123	15.15	1.13	1.49	4.54
including	107.85	121.1	13.25	1.19	1.68	5.01
CLG070	25.5	30	4.5	0.99	2.48	6.64
HS13	22	24	2	1.72	0.20	2.18
HS20	18	21	3	1.16	0.22	1.66

Table 2: Drillhole Summary, Hillgrove Mines

Hole ID	Easting	Northing	RL	Hole Depth	Azimuth	Dip	Grid	Date Drilled	Tenement ID	Company
CHS1	392763	6621182	1988	19.70	62	0	GDA94_Z56	1/11/1991	ML1332	NEAM
CHS2	392786	6621300	1980	9.50	57	0	GDA94_Z56	1/11/1991	ML1332	NEAM
CHS3	392762	6621240	1986	14.30	355	0	GDA94_Z56	1/11/1991	ML1332	NEAM
CHS4	392778	6621164	1990	11.00	54	0	GDA94_Z56	1/11/1991	ML1332	NEAM
CHS5	392791	6621135	1991	3.80	30	0	GDA94_Z56	1/11/1991	ML1332	NEAM
CHS6	392772	6621224	1984	7.80	53	0	GDA94_Z56	1/11/1991	ML1332	NEAM
CHS7	392795	6621237	1984	6.40	65	0	GDA94_Z56	1/11/1991	ML1332	NEAM
CHS8	392811	6621339	1978	5.50	36	0	GDA94_Z56	1/11/1991	ML1332	NEAM



CHS9	392755	6621203	1988	17.50	43	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CHS10	392752	6621235	1986	10.30	32	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CHS11	392779	6621319	1980	12.30	67	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CHS12	392775	6621345	1979	6.40	60	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CHS13	392716	6621335	1981	8.30	71	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CHS14	392715	6621186	1992	5.90	200	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CHS15	392770	6621166	1990	3.90	47	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CHS16	392799	6621119	1991	33.00	300	0	GDA94 Z56	1/11/1991	ML1332	NEAM
CLG001	392912	6620895	1992	48.00	66	-50	GDA94 Z56	19/05/2004	ML714	SHG
CLG002	392895	6620885	1993	48.00	66	-50	GDA94 Z56	20/05/2004	ML714	SHG
CLG003	392877	6620875	1993	48.00	66	-50	GDA94 Z56	20/05/2004	ML714	SHG
CLG004	392859	6620865	1993	48.00	66	-50	GDA94 Z56	20/05/2004	ML714	SHG
CLG005	392840	6620861	1994	48.00	66	-50	GDA94 Z56	21/05/2004	ML714	SHG
CLG006	392798	6620945	2000	48.00	66	-50	GDA94 Z56	22/05/2004	ML714	SHG
CLG007	392824	6620960	1999	48.00	66	-50	GDA94 Z56	22/05/2004	ML714	SHG
CLG008	392849	6620979	1998	48.00	66	-50	GDA94 Z56	24/05/2004	ML714	SHG
CLG009	392879	6620986	1996	48.00	66	-50	GDA94 Z56	26/05/2004	ML714	SHG
CLG010	392906	6620998	1995	48.00	66	-50	GDA94_Z56	25/05/2004	ML714	SHG
CLG011	392816	6621067	1996	100.00	66	-50	GDA94_Z56	24/05/2004	ML1332	SHG
CLG011	392810	6621265	1981	130.00	252	-50	GDA94_256	7/08/2004	ML1332	SHG
CLG012	392789	6621308	1979	78.00	252	-55	GDA94_256	8/08/2004	ML1332	SHG
CLG013	392820	6621269	1981	150.00	252	-60	GDA94_256	13/08/2004	ML1332	SHG
CLG014	392797	6621310	1979	168.00	252	-62	GDA94_Z56	12/08/2004	ML1332	SHG
CLG015	392828		1986		252	-62 -55	GDA94_Z56 GDA94_Z56	13/08/2004	ML1332	SHG
		6621208		162.00			_			
CLG017	392782	6621339	1978	118.00	249	-65.5	GDA94_Z56	3/04/2005	ML1332	SHG
CLG018	392820	6621353	1977	184.00	249	-62	GDA94_Z56	4/04/2005	ML1332	SHG



CLG019	392834	6621316	1978	163.00	249	-61.5	GDA94 Z56	9/04/2005	ML1332	SHG
CLG020	392849	6621279	1981	175.00	249	-62.5	GDA94_Z56	9/04/2005	ML1332	SHG
CLG021	392865	6621242	1982	172.00	249	-63	GDA94_Z56	10/04/2005	ML1332	SHG
CLG022	392843	6621192	1986	124.00	249	-69	GDA94_Z56	11/04/2005	ML1332	SHG
CLG023	392880	6621205	1984	178.00	249	-64	GDA94_Z56	12/04/2005	ML1332	SHG
CLG024	392858	6621155	1988	94.00	249	-71	GDA94_Z56	15/04/2005	ML1332	SHG
CLG025	392894	6621168	1987	184.00	249	-65	GDA94_Z56	18/04/2005	ML1332	SHG
CLG026	392873	6621118	1991	136.00	249	-72.5	GDA94_Z56	20/04/2005	ML1332	SHG
CLG027	392864	6621151	1989	82.00	249	-66	GDA94_Z56	18/04/2005	ML1332	SHG
CLG028	392854	6621366	1975	246.50	249	-62.5	GDA94_Z56	4/05/2005	ML1332	SHG
CLG029	392661	6621428	1980	49.00	50	-60	GDA94_Z56	21/06/2005	ML1332	SHG
CLG030	392648	6621424	1981	187.00	249	-63	GDA94_Z56	22/06/2005	ML1332	SHG
CLG031	392888	6621379	1974	301.30	249	-60	GDA94_Z56	24/06/2005	ML1332	SHG
CLG032	392918	6621304	1976	276.00	249	-60	GDA94_Z56	26/06/2005	ML1332	SHG
CLG033	392781	6621359	1978	139.00	277	-61	GDA94_Z56	29/06/2005	ML1332	SHG
CLG034	392998	6620805	1983	132.00	249	-60	GDA94_Z56	2/07/2005	EL3326	SHG
CLG035	392939	6620961	1991	163.00	249	-60	GDA94_Z56	6/07/2005	ML714	SHG
CLG036	392970	6620884	1986	144.00	249	-60	GDA94_Z56	18/07/2005	ML714	SHG
CLG037	393034	6620705	1974	174.00	267	-60	GDA94_Z56	20/07/2005	EL3326	SHG
CLG038	392916	6621022	1993	144.00	249	-60	GDA94_Z56	23/07/2005	ML714	SHG
CLG039	392801	6621304	1980	138.70	249	-56	GDA94_Z56	7/08/2005	ML1332	SHG
CLG040	392951	6621229	1980	280.20	249	-60	GDA94_Z56	10/09/2005	ML1332	SHG
CLG041	392982	6621152	1984	299.30	249	-60	GDA94_Z56	23/09/2005	ML1332	SHG
CLG042	392897	6621253	1981	210.50	249	-63	GDA94_Z56	11/10/2005	ML1332	SHG
CLG043	392882	6621291	1979	199.50	249	-60	GDA94_Z56	21/10/2005	ML1332	SHG
CLG044	392786	6621217	1985	80.00	245	-60	GDA94_Z56	1/12/2014	ML1332	HGM



CLG045	392834	6621273	1981	137.90	250	-60	GDA94 Z56	11/12/2014	ML1332	HGM
CLG046	392720	6621285	1985	80.90	245	-60	GDA94 Z56	6/01/2015	ML1332	HGM
CLG047	392720		1983		60	-60	GDA94_256			HGM
		6621298		100.40			_	13/01/2015	ML1332	
CLG048	392764	6621301	1983	99.80	245	-61	GDA94_Z56	28/01/2015	ML1332	HGM
CLG049	392727	6621345	1980	100.20	337	-55.5	GDA94_Z56	4/02/2015	ML1441	HGM
CLG050	392741	6621190	1990	20.20	0	-90	GDA94_Z56	8/02/2015	ML1332	HGM
CLG051	392759	6621177	1989	15.00	0	-90	GDA94_Z56	8/02/2015	ML1332	HGM
CLG052	392879	6621101	1990	107.00	245	-60.5	GDA94_Z56	16/04/2015	ML1332	HGM
CLG053	392811	6621175	1989	60.00	243	-60.5	GDA94_Z56	30/04/2015	ML1332	HGM
CLG054	392806	6621198	1988	69.00	245	-60.5	GDA94_Z56	4/05/2015	ML1332	HGM
CLG055	392807	6621218	1986	75.00	245	-60	GDA94_Z56	8/05/2015	ML1332	HGM
CLG056	392851	6621218	1985	120.00	245	-60	GDA94_Z56	15/05/2015	ML1332	HGM
CLG057	392836	6621230	1985	115.10	245	-60	GDA94_Z56	22/05/2015	ML1332	HGM
CLG058	392823	6621323	1978	150.00	245	-60	GDA94_Z56	1/06/2015	ML1332	HGM
CLG059	392752	6621321	1981	60.00	245	-60	GDA94_Z56	18/06/2015	ML1332	HGM
CLG060	392734	6621345	1980	60.00	245	-60	GDA94_Z56	22/06/2015	ML1332	HGM
CLG061	392771	6621361	1978	101.80	245	-60	GDA94_Z56	26/06/2015	ML1332	HGM
CLG062	392707	6621391	1977	47.60	245	-60	GDA94_Z56	8/12/2015	ML1332	HGM
CLG063	392728	6621394	1977	59.90	245	-60	GDA94_Z56	14/12/2015	ML1332	HGM
CLG064	392759	6621405	1976	35.90	245	-60	GDA94_Z56	7/01/2016	ML1332	HGM
CLG065	392802	6621345	1978	56.60	245	-65	GDA94_Z56	12/01/2016	ML1332	HGM
CLG066	392809	6621291	1980	95.60	245	-55	GDA94_Z56	18/01/2016	ML1332	HGM
CLG067	392834	6621303	1979	146.60	245	-60	GDA94_Z56	26/01/2016	ML1332	HGM
CLG068	392814	6621243	1983	77.30	245	-55	GDA94_Z56	4/02/2016	ML1332	HGM
CLG069	392843	6621257	1983	134.40	245	-60	GDA94_Z56	9/02/2016	ML1332	HGM
CLG070	392662	6621409	1980	47.20	65	-50	GDA94_Z56	16/02/2016	ML1332	HGM



HLV001	392825	6620769	1992	59.50	42	-50	GDA94_Z56	10/11/2011	EL5973	SHG
HS1	393385	6621221	1968	17.00	224	-50	GDA94_Z56	1/12/1990	ML714	NEAM
HS2	393420	6621218	1966	18.00	210	-50	GDA94_Z56	1/12/1990	ML714	NEAM
HS3	393440	6621186	1965	11.00	30	-45	GDA94_Z56	1/12/1990	ML714	NEAM
HS4	393440	6621188	1965	18.00	212	-50	GDA94_Z56	1/12/1990	ML714	NEAM
HS5	393440	6621172	1966	18.00	32	-45	GDA94_Z56	1/12/1990	ML714	NEAM
HS6	393465	6621178	1964	21.00	208	-50	GDA94_Z56	1/12/1990	ML714	NEAM
HS7	393457	6621162	1966	18.00	28	-45	GDA94_Z56	1/12/1990	ML714	NEAM
HS8	393501	6621162	1964	18.00	207	-50	GDA94_Z56	1/12/1990	ML714	NEAM
HS9	392755	6621261	1986	14.50	200	-45	GDA94_Z56	1/12/1990	ML1332	NEAM
HS10	392753	6621254	1986	17.50	200	-45	GDA94_Z56	1/12/1990	ML1332	NEAM
HS11	392780	6621182	1988	17.60	232	-45	GDA94_Z56	1/12/1990	ML1332	NEAM
HS12	392772	6621202	1987	20.00	239	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS13	392784	6621209	1985	24.00	239	-45	GDA94_Z56	16/12/1991	ML1332	NEAM
HS14	392763	6621231	1985	21.00	245	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS15	392775	6621238	1984	21.00	245	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS16	392743	6621255	1986	14.00	245	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS17	392755	6621261	1986	21.00	245	-45	GDA94_Z56	18/12/1991	ML1332	NEAM
HS18	392768	6621268	1984	24.00	245	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS19	392735	6621262	1986	24.00	67	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS20	392806	6621283	1980	21.00	245	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS21	392800	6621294	1980	18.00	257	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS22	392793	6621314	1980	21.00	255	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS23	392762	6621274	1984	20.00	247	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS25	392794	6621277	1981	10.00	245	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS26	392788	6621243	1983	24.00	245	-45	GDA94_Z56	1/12/1991	ML1332	NEAM



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HS27	392801	6621250	1982	21.00	245	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS28	392792	6621189	1988	24.00	239	-45	GDA94_Z56	1/12/1991	ML1332	NEAM
HS29	392792	6621161	1990	18.00	252	-45	GDA94_Z56	1/03/1992	ML1332	NEAM
HS32	392749	6621291	1983	19.00	246	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS33	392741	6621309	1982	18.00	246	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS34	392781	6621220	1985	22.00	240	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS34A	392727	6621324	1981	22.00	246	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS34R	392733	6621328	1981	12.00	246	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS35	392791	6621337	1979	12.50	256	-45	GDA94_Z56	1/07/1992	ML1332	NEAM
HS36	392772	6621154	1991	22.00	72	-45	GDA94_Z56	1/03/1992	ML1332	NEAM
HS37	392793	6621142	1992	18.00	247	-45	GDA94_Z56	1/03/1992	ML1332	NEAM
HS38	392823	6621243	1984	21.00	90	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS39	392837	6621241	1984	20.00	90	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS40	392852	6621198	1982	18.00	90	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS41	392724	6621345	1980	15.00	246	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS41A	392717	6621342	1981	9.00	246	-45	GDA94_Z56	1/06/1992	ML1332	NEAM
HS42	392718	6621364	1979	13.00	246	-45	GDA94_Z56	1/07/1992	ML1332	NEAM
HS42A	392712	6621361	1979	15.00	246	-45	GDA94_Z56	1/07/1992	ML1332	NEAM
HS43	392709	6621382	1978	15.00	246	-45	GDA94_Z56	1/07/1992	ML1332	NEAM
HS43A	392702	6621378	1979	12.00	246	-45	GDA94_Z56	1/07/1992	ML1332	NEAM
HS44	392690	6621417	1978	6.00	246	-45	GDA94_Z56	1/07/1992	ML1332	NEAM
HS45	392684	6621434	1978	3.00	246	-45	GDA94_Z56	1/07/1992	ML1332	NEAM
HS46	392766	6621180	1988	21.00	65	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS50	392783	6621194	1988	18.70	245	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS51	392763	6621186	1988	18.00	65	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS52	392769	6621248	1985	18.00	245	-45	GDA94_Z56	1/01/1993	ML1332	NEAM



HS53	392760	6621243	1985	20.00	245	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS58	392826	6621302	1979	16.00	59	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS59	392852	6621316	1978	15.00	239	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS60	392904	6621346	1975	15.00	59	-45	GDA94_Z56	1/01/1993	ML1332	NEAM
HS61	393016	6621409	1970	5.00	59	-45	GDA94_Z56	1/01/1993	EL3326	NEAM
HS63	393042	6621424	1969	6.00	239	-45	GDA94_Z56	1/01/1993	EL3326	NEAM
HS64	393034	6621419	1969	5.00	239	-45	GDA94_Z56	1/01/1993	EL3326	NEAM
HS65	393025	6621414	1970	5.00	239	-45	GDA94_Z56	1/01/1993	EL3326	NEAM



## Appendix B

## JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	Surface costean samples Diamond drillcore samples Reverse circulation (RC) chip samples Percussion chip samples Underground channel samples Underground channel 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 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.  Drilling program sample preparation and analysis from January 2007 and February 2021 were as follows:  Samples up to 3kg were crushed to a nominal 6mm, then pulverized to a nominal 75micron 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 30g or 50g were assayed by fire assay. If coarse gold is identified visually in the sample, or if gold

	assay is greater than 10 ppm, the	sample is analysed by screen fire assay.
Drilling Techniques	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).  diamond drilling with RC pre-colla for the 2020/21 drilling program.  Drillcore sample data used for the half-core samples from BQTK, LT  Core orientation marks were attegranes from January 2007 and 200	empted using a spear and crayon in mineralized 08.
Drill Sample Recovery	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> <li>Drilling techniques were changed gouge zones. Drilling muds were in change in technique decreased the Drillcore photos, and geotechnical projects.</li> <li>Core loss/core recovery and void transferred to the acQuire database.</li> </ul>	l using a qualitative code and recorded in the was measured, recorded on a digital device, and se. when drilling through highly fractured rock or increased; water pressure was reduced. This
Logging	<ul> <li>appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> <li>Drilling programs prior to January 200</li> <li>Lithology, weathering, mineralisat logged.</li> <li>Some core loss intervals have been intervals have been intervals have been logged quantity.</li> <li>There is sufficient logging to suppostudies.</li> <li>A geotechnical study by a qualifiered.</li> <li>RQD logging data is available, and</li> </ul>	cion, veining, alteration and structure were logged ged (quantitatively).  Is were recorded for most mineralisation  Of cion, veining, alteration and structure were en logged qualitatively, and some core recovery itively.  Foot mineral resource estimates, and mining



Criteria	JORC Code Explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Drilling programs from January 2007:</li> <li>Samples up to 3kg were crushed to a normal 85% passing 75micron.</li> <li>Some intervals were adjusted within mineralisation to correspond with a change in mineralisation style, or by observed changes in concentration of minerals of economic interest.</li> <li>Duplicate samples were collected following the coarse crush (up to 3kg) and following the pulverisation at a rate of 5%. Duplicate samples of pulverized material from the 2007/8 sampling were sent to an umpire laboratory at a rate of approximately 5% for the mineralized zones.</li> <li>Drilling programs prior to 2007: There is limited documentation for the sample preparation methods and QAQC procedures.</li> <li>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 110-gram samples. One sample was stored for check assaying and one was pulverised in ring mill and a 10g portion</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>For drilling from 2007:</li> <li>The laboratory procedures and assaying are appropriate, and the laboratory is NATA certified. The analytical methods are considered total for the elements of interest.</li> <li>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.</li> <li>For Channel Sampling. Although the actual QAQC data has not been reviewed conclusions from company records state that:</li> <li>Periodically random duplicate crush splits were check assayed with conclusion of no systematic assay bias. High gold assays also had their duplicate assayed.</li> <li>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.</li> <li>Historic mine production at different times indicate that up to 15% overall on antimony grades for estimates based on channel sample data may occur.</li> <li>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.</li> </ul>



Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>The AMC Competent Person visited Hillgrove in March and September 2019 and inspected mineralised drillcore and checked the database.</li> <li>All drilling in the 2020/2021 program was undertaken within the previously reported Mineral Resource area with the intention of verifying the earlier results.</li> <li>Drilling from the 2022 Bakers Creek program is outside off the current resource.</li> <li>Adjacently drilled holes from different programs/drilling methods were assessed for interval thickness and grade variance.</li> <li>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 drill hole data.</li> <li>Assay data is not adjusted.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole collars were surveyed and down-hole surveys are taken using appropriate tools.</li> <li>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.</li> <li>Historic Eleanora stopes and ore drive locations have been estimated from digitised plans and sections.</li> <li>The Grid system is AGD66. Recent Lidar survey of topography was completed for the Eleanora and Garibaldi areas.</li> <li>Bakers Creek collars were surveyed with RTKGPS (+-0.1m). Downhole surveys conducted with digital magnetic multi-shot camera at 20-40m intervals. A portion of drill holes were surveyed by multi-shot survey. Coordinate system used is GDA94 MGA Zone 56.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Eleanora drill hole intercepts are spaced at 60m x 60m out to 80m x 80m.</li> <li>Garibaldi drill hole intercepts are spaced at 30m x 30m out to 80m x 80m.</li> <li>Sections of the Eleanora Resource are based on Level channel sample data, these samples are a nominal 1.5 m spacing along ore drives and vertically 35 to 50m between Levels. In stope channel samples between Levels were not used in the estimation process.</li> <li>This distribution confirms a degree of geological continuity within the mineralized system such that Mineral Resource Estimation and the assigned classifications are appropriate.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>The drill holes were drilled at varying angles to intersect the steeply dipping mineralisation at the best possible angle given the available locations for drill sites.</li> <li>The drill hole locations, and orientations relative to the mineralisation are considered satisfactory. Intersection angles have been taken into consideration during the estimation process.</li> </ul>

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 coreshed, or in a container located in an area which requires authorization to gain access.
Audits or reviews	The results of any audits or reviews of sampling techniques and data	<ul> <li>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.</li> <li>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.</li> <li>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.</li> </ul>

## 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	<ul> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul> <li>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.</li> <li>All tenements are currently in good standing.</li> <li>The Exploration Leases are in good standing.</li> <li>There are no joint venture agreements relevant to the area of interest.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>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 onsite.</li> </ul>



Geology	Deposit type, geological setting and style of mineralisation.	• The Hillgrove mineralisation can be classified as orogenic stye, 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 and as particle gold.
Drill hole information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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</li> </ul>	<ul> <li>Drill hole collar coordinates and elevation have been accurately surveyed by a qualified surveyor.</li> <li>Dip and azimuth of the drill holes 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.</li> <li>Hole length and downhole intervals have been recorded using the standard practice of drill rod lengths and checked by geological staff.</li> </ul>
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Past exploration results have been reported based on historic economic requirements for a standalone deposit at Hillgrove.</li> <li>Intercepts that have been bulked over multiple intervals use weighted averaging techniques to report the grades.</li> <li>During the estimation process top-capping was applied to anomalous high grades.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>All drill holes were designed to intersect the mineralised zones as close to true width as possible.</li> <li>When assessing drill hole intercepts the dip and strike of the mineralised zones has been taken into consideration.</li> <li>Drill holes with less than ideal intersection angles were identified and accommodated in the estimation process.</li> </ul>

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 new 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 new 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.	<ul> <li>A Helimag airborne geophysical survey was flown over the Hillgrove tenements in 2007. Several exploration targets were generated from the resulting images.</li> <li>A Lidar survey was completed in 2017 over the Bakers Creek Gorge to provide 1m contours for topographic control and aerial photos for exploration.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Work is ongoing at Hillgrove, including exploration and the restart study.</li> <li>Resource definition at the Metz Mine area will commence in due course.         Additional drilling and or development sampling is required to establish Measured Resource at Eleanora and Garibaldi.     </li> </ul>

## 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	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Procedures are available for loading data in the database and standard database import and export objects are used to upload and download data.</li> <li>The validation of collar and downhole survey, analytical method, and QAQC data is recorded in spreadsheets.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	The Competent Person visited the site in March and September 2019 and reviewed the sampling, analytical methods, QAQC, procedures and the database.



Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>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.</li> <li>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 the 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.</li> </ul>
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.	<ul> <li>The Eleanora / Garibaldi mineralised system is defined over 1.3km along strike to 800 m below surface. The Resource is currently limited to 500m below surface. The width of the mineralisation is generally between 0.3 to 6m. A lamprophyre dyke of generally around 1m width has intruded along the mineralised structure and often divides the mineralisation into parallel lodes.</li> <li>Although the mineralisation is generally strongest on the main structure; splays, parallel structures and network veining host hanging wall and footwall mineralisation.</li> <li>In the south, in the Garibaldi area an additional two parallel lodes are defined in the east wall. Of these lodes the eastern lodes become more dominant toward the south. In this area the resource is limited to 300m depth due to the current depth extent of the drilling.</li> </ul>
Estimation and modelling techniques	<ul> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of byproducts.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> </ul>	<ul> <li>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.</li> <li>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 drill hole sample selectivity was noted and considered during the estimation process.</li> <li>In total 7 domains in the Eleanora area and 3 in Garibaldi area were estimated. An unconstrained estimate of hanging wall and footwall material was undertaken.</li> <li>Sample compositing within domains to approximate 0.5 m true width was undertaken.</li> <li>Anomalously high gold and antimony grade values were top-capped.</li> <li>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.</li> <li>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.</li> <li>A 3D block model 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</li> </ul>

	<ul> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>Estimation of gold and antimony grades was carried out using ordinary kriging and inverse distance squared methods.</li> <li>Multiple estimation passes were used with increasing search ellipses.</li> <li>Historical Mine production showing a high antimony bias from channel samples was taken into account.</li> <li>Digitised historical records of underground stoping was used to exclude mined out material from the model.</li> <li>No allowance is made for the recovery of by-products.</li> <li>Underground mining methods assume a selective approach to limit dilution however the actual dimensions are not assumed in the resource models.</li> <li>The correlation between bulk density and antimony is used.</li> <li>Model validation was conducted by visually checking drill hole grades to block grades in plan and section view, and by reviewing.</li> <li>Full width domain intervals were checked against domain thickness, for conservation of volume.</li> </ul>
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.	<ul> <li>The gold equivalent cut-off is based on a gold price of \$US1,234 per ounce and antimony price of \$US5650 per tonne.</li> <li>The gold equivalent equation is:</li> <li>AuEq = Au_ppm + ((5650/100) /</li> <li>(1234/31.1035))*Sb_pct</li> <li>Previous mill production demonstrates both antimony and gold can be recovered and sold, and that the stated recoveries are achievable.</li> <li>Total gravity/float recoveries of 91% gold and 86% antimony.</li> <li>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.</li> <li>No minimum lode thickness constraints have been placed upon the Resource.</li> </ul>
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	Mining methods are assumed for to be underground long hole stoping techniques

	case, this should be reported with an explanation of the basis of the mining assumptions made.	
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.	<ul> <li>Metallurgical testwork and production data through the Hillgrove mill, shows that total gravity / float recoveries of 91% Au and 86% Sb are achievable.</li> <li>This antimony recovery is applicable where Sb head grades are 1% or greater.</li> </ul>
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	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Bulk density was measured by the water displacement method using buoyancy for drillcore samples from 2005.</li> <li>A regression between bulk density and estimated antimony grade was developed.</li> <li>Density was written to the Resource Model using estimated antimony grade and the regression formula.</li> </ul>



Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>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 mineralised material.</li> <li>Measured, Indicated and Inferred blocks have been reported.</li> <li>The resource classification is deemed appropriate in relation to the drill spacing and geological continuity of the mineralised domains, recovery, sample spacing and QAQC results.</li> <li>The classification appropriately reflects the Competent Persons confidence of the estimate of the ore body.</li> <li>Indicated areas are sampled either through development and channel sampling or diamond drilling generally at 30 m spacing out to an 80 m spacing.</li> <li>Inferred areas are extensions beyond indicated areas and are drilled out to a 100m drill hole is limited to generally 60m.</li> <li>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</li> <li>sampling which lowers the confidence level of the estimate. For this reason, the area has been classified as Indicated.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>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.</li> <li>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.</li> </ul>
Discussion of relative accuracy/confidence	<ul> <li>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.</li> <li>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.</li> </ul>	The Competent Person(s) 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.



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

