

10 June 2022

## **Gibsons Continues to Extend High Grade Base Metal Mineralisation**

Critical Resources Limited (ASX:CRR) ("Critical Resources" or the "Company") is pleased to advise that it has received assay results from diamond drill hole CRR21\_DD016 (Hole 16) at its 100% owned Gibsons prospect. Hole 16 has intersected zinc, lead, copper, and silver bearing zones of sulphide mineralisation. The mineralisation discovered in Hole 16 continues to expand the potential of the Halls Peak system.

### **Highlights**

- **7.6m @ 5.9% Zn, 1.16% Pb, 0.19% Cu, 7.23g/t Ag from 62-69.6m downhole**
- **3.7m @ 2.37% Zn, 1.09% Pb, 227.33/t Ag, 0.31g/t Au from 98.8-102.5m downhole**
- **3.1m @ 9.21% Zn, 4.66% Pb, 1.97% Cu, 59.67/t Ag, 0.33g/t Au from 163.2-166.3m downhole**
- **Highly anomalous base metal mineralisation is observed to a depth of 166.3m**
- **Hole 16 represents a previously undrilled area, north-east of all drilling to date**
- **Strong mineralisation at depth continues to expand the potential of the Halls Peak system**
- **Cores from completed holes 17 and 18 are currently being assayed at the ALS laboratory in Brisbane with results expected progressively**

### **Gibsons' Mineralisation Extended**

The Company is pleased to have received assay results from Hole 16 of its drilling program at its 100% owned Halls Peak project in New South Wales. Hole 16 was drilled in a northerly direction, to test the mineralisation extent seen in previously announced Hole 14<sup>1</sup>. CRR21DD\_15 ("Hole 15") was also being drilled to test the extent of mineralisation, but was abandoned due to the inability of the diamond drill to advance through a puggy fault. Discovering further mineralisation in Hole 16 expands the known area of mineralisation at Gibsons, increasing the potential extent of mineralisation and supporting the extended drill campaign that is currently being undertaken.

Critical Resources Managing Director Alex Biggs said: "Further expansion of drilling in the northerly direction at Gibsons with encouraging results is exciting. Delineating high grades at depth demonstrates the previously unknown potential of Halls Peak as a whole. We are consistently uncovering new mineralisation in multiple directions but are seeing a trend north-westerly from Gibsons. Drilling at Sunnyside will be commencing in the coming weeks which will further allow us to test scale and continuity of mineralisation along a 1.5km strike distance. We look forward to keeping the market updated as we progress".

<sup>1</sup>See ASX Announcement 30 May 2022

### Summary of Key Polymetallic Intersections - Hole 16

- 7.6m @ 5.9% Zn, 1.16% Pb, 0.19% Cu, 7.23g/t Ag, 0.03g/t Au, from 62-69.6m downhole
- 3.7m @ 2.37% Zn, 1.09% Pb, 0.66% Cu, 227.33/t Ag, 0.31g/t Au from 98.8-102.5m downhole
- 6.1m @ 1.18% Zn, 0.52% Pb, 0.26% Cu, 58.68g/t Ag, 0.48g/t Au from 107-113.1m downhole
- 3m @ 1.18% Zn, 0.59% Pb, 0.25% Cu, 134.30g/t Ag, 0.57g/t Au from 121.3-124.3m downhole
- 2m @ 1.17% Zn, 2.57% Pb, 2.56% Cu, 42.85g/t Ag, 0.08g/t Au from 133-135m downhole
- 2m @ 5.38% Zn, 2.75% Pb, 0.40% Cu, 18.08g/t Ag, 0.07g/t Au from 147.5-149.5 downhole
- 3.1m @ 9.21% Zn, 4.66% Pb, 1.97% Cu, 59.67/t Ag, 0.33g/t Au from 163.2-166.3m downhole

Figure 1: CRR21DD\_16, interval comprising samples 42781-42788 assaying 7.6m @ 5.9% Zn, 1.16% Pb, 0.19% Cu, 7.23g/t Ag, 0.03g/t Au from 62-69.6m downhole including 1.3m @ 13.47% Zn from 65.60-66.90m (NQ core, 50mm diameter)



**Figure 2: CRR21DD\_016, detail from above Figure 1 of Samples (42)784 top row and (42)785 bottom row (65.60-66.90m downhole) exhibiting extensive, coarse, yellowy-brown sphalerite that assayed 13.47% Zn (NQ core, 50mm diameter)**



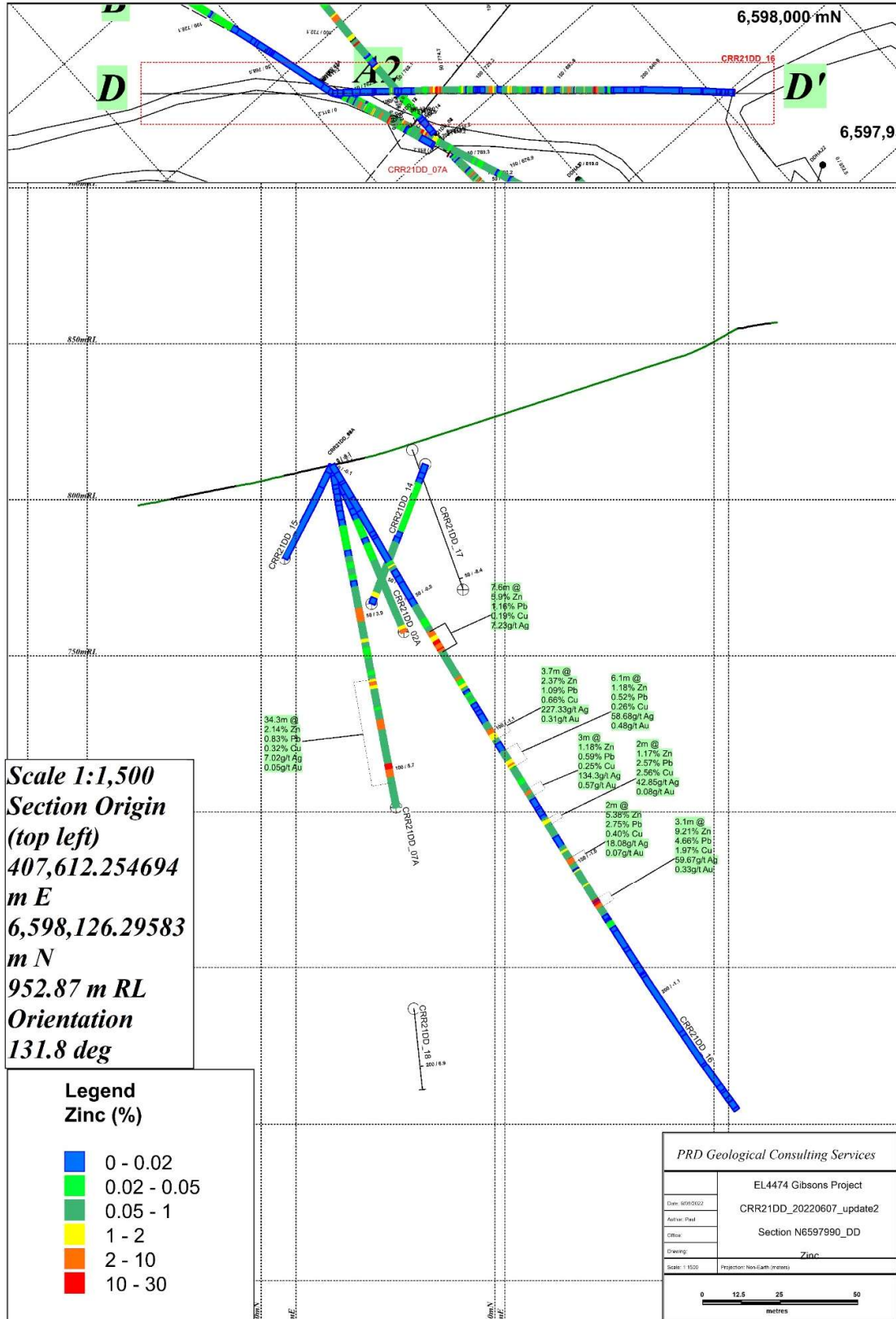
**Figure 3: CRR21DD\_16, interval comprising samples 42855-42857 assaying 3.1m @ 9.21% Zn, 4.66% Pb, 1.97% Cu, 59.67/t Ag, 0.33g/t Au from 163.2-166.3m downhole from 163.2-166.3m downhole (NQ core, 50mm diameter)**



**Figure 4: CRR21DD\_016, detail from above Figure 3 of Samples (42)855 (top row) and (42)856 (bottom row) that extended from 163.20-165.10m downhole) exhibiting massive sulphide – sampled interval assayed 12.72% Zn, 6.25% Pb, 1.72% Cu, 44.62g/t Ag, 0.46g/t Au (NQ core, 50mm diameter)**



Figure 5: Cross-section and downhole intersection, diamond drill hole CRR21DD\_16 and CRR21DD\_15

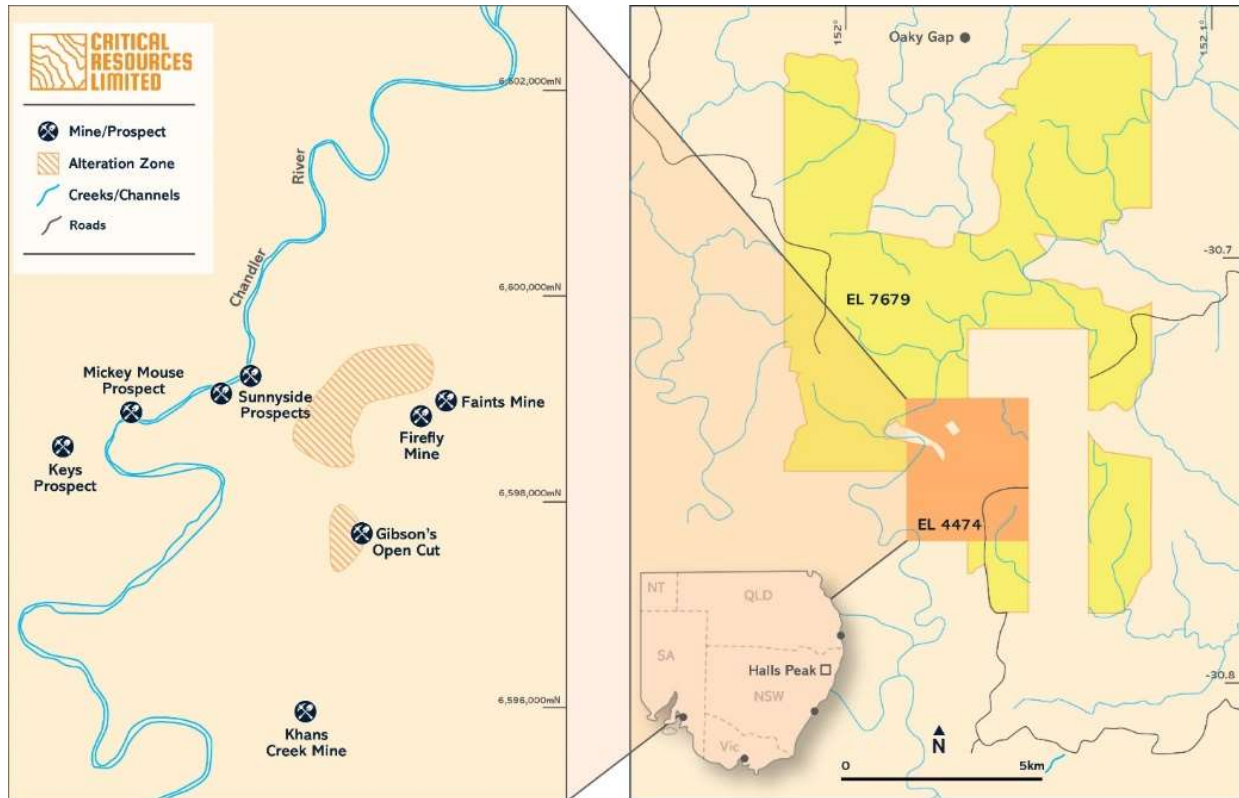


### **Halls Peak Project Description**

The 100% owned Halls Peak project is located in New South Wales approximately 45km South-East of Armidale in the New England Fold Belt, an area well known for its mineral endowment and production. The Halls Peak massive sulphide deposits were discovered in 1896 where near surface mining extracted high-grade Zinc, Lead, Copper and Silver. Recent exploration at the Gibsons prospect has yielded excellent high-grade intersections of zinc, lead, copper and silver. Multiple geophysical targets exist across the Halls Project which form the basis for further exploration and growth of the known mineralisation extents. Multiple geophysical targets exist across the Halls Peak Project which form the basis for further exploration and growth of the known mineralisation extents.

Halls Peak is considered to have potential to contain world class deposits similar to those already being mined in northern Australia. The project area comprises multiple historic mines and prospects including Gibsons, Sunnyside, Firefly, Faints, Khans Creek, Keys and Mickey Mouse. All current exploration activities are focused on exploration licence EL 4474 with primary targets being the Gibsons and Sunnyside prospects. A summary of the project location is shown in Figure 6.

Figure 6: Halls Peak project location



### The Large Scale Potential of the Halls Peak System

Halls Peak hosts a large mineralised system with numerous widespread high-grade zinc-lead-copper-silver deposits.

The system has potential to extend beyond the boundaries defined by the historic mines and prospects plotted in Figure 6. However, these define an area of at least 14km<sup>2</sup> (3.5km south to north from Khans Creek Mine to Sunnyside Prospects and at least 5km from east of Faints Mine to Keys Prospect).

Recent drilling by the Company has confirmed base metal sulphide mineralisation extends vertically over 300m in deepest holes drilled.

The vast majority of the lateral and vertical extent has never been tested by drilling, clearly there is substantial potential for World Class Tier 1 discovery in this extremely large mineralised system.

### The Halls Peak System – Dominant Mineralisation Style

Sedex Zinc-Lead-Copper-Silver deposits are interpreted by the Company's geologists to be the dominant mineralisation style discovered at Halls Peak.

**Overview of Australian Sedex Deposits**, extracted from Australian Pb-Zn-Ag Sedex Deposits Origins, Current Research, Exploration Guidelines, G.M. Derrick and Associates, May 2000.

*"Australian Sedex Deposits" are fine-grained sediment-hosted Pb-Zn-Ag deposits which are best developed in the Mt Isa Inlier and McArthur Basin regions of northern Australia. The Mt Isa to McArthur series of deposits include Isamine, Hilton, George Fisher, Lady Loretta, Century, HYC, and Dugald River. By any standards, these are major accumulations of metal – average size is about 100mt @ +10% Pb+Zn; direct shipping grades of +50% Pb+Zn are present at Lady Loretta locally, and*

Ag credits range from 35g/t at Century, 60g/t at HYC to 100 to 150g/t at Isa-Hilton.

Main regional geological criteria can be described as:

- Rifting,
- Growth Faulting,
- 3rd order pyritic & carbonaceous basins and
- Basement feldspar-rich source rocks
- Most settings are intracontinental rifts or rifted margins, and deposits are best developed in the youngest of sag basins."

Significantly, the Company's geologists note that the Zn-Pb-Cu-Ag mineralisation at Halls Peak has a **diagnostic** Sedex setting within an extensional, intracontinental rift associated with growth faults, and pyritic and carbonaceous sediments in pull-apart, graben basins.

*At Halls Peak there is undoubtedly room for large deposits to occur since the limit of favourable horizons has not been defined. There are at least 3 mineralised horizons involving 8,000 metres of favourable argillites.*

*In summary it is felt that the possibility of commercially interesting deposits existing at Halls Peak is quite high and detailed surface exploration (geophysics, geochemistry, gossan search) of all potential host units (argillite and acid volcanoclastics) is desirable. Further work would depend on the successful delineation of targets of the order of several hundred metres length. Previous drilling results includes:*

***Critical Resources Limited – ASX Announcements***

26.7m @ 3.43% Zn, 1.93% Pb, 10.79g/t Ag  
5.5m @ 6.74% Zn, 6.06% Pb, 135.78/t Ag  
2.95m @ 15.28% Zn, 9.22% Pb, 2.01% Cu, 300.91g/t Ag  
4m @ 3.14% Zn, 2.00% Pb, 610.50/t Ag, 2.36g/t Au  
(refer ASX Announcement 30 May 2022)  
6.91m @ 9.41% Zn, 2.45% Pb, 1.56% Cu, 34.6g/t Ag  
5.6m @ 8.20% Zn, 4.33% Pb, 1.81% Cu, 393.23g/t Ag  
4.9m @ 3.91% Zn, 1.24% Pb, 0.15% Cu, 8.55g/t Ag  
17.75m @ 2.20% Zn, 1.28% Pb, 0.18% Cu, 19.34g/t Ag  
(refer ASX Announcement 26 May 2022)  
6.37m @ 7.31% Zn, 0.89% Pb, 0.22% Cu, 10.33g/t Ag, 0.08g/t Au  
5.3m @ 4.10% Zn, 1.78% Pb, 0.49% Cu, 25.17g/t Ag, 0.09g/t Au  
34.3m @ 2.14% Zn, 0.83% Pb, 0.32% Cu, 7.02g/t Ag, 0.05g/t Au  
(refer ASX Announcement 23 May 2022)  
7.63 metres @ 0.23% Zn, 0.01% Pb, 1.15% Cu, 73.15g/t Ag, 0.01g/t Au  
(refer ASX Announcement 05 April 2022)  
3.6 metres @ 15.06% Zn, 8.38% Pb, 0.69% Cu, 37.51g/t Ag, 0.09g/t Au  
(refer ASX Announcement dated 09 March 2022)  
7.53m @ 4.20% Zn, 1.92% Pb, 0.39% Cu, 19.15g.t Ag, 0.11g/t Au  
7.18m @ 3.63% Zn, 1.89% Pb, 0.77% Cu, 15.82g/t Ag, 0.09g/t Au  
1.28m @ 13.5% Zn, 4.75% Pb, 0.71% Cu, 21.5g/t Ag, 0.09g/t Au  
(refer ASX Announcement dated 21 February 2022)  
5.30m @ 26.29% Zn, 12.49% Pb, 1.28% Cu, 49.18g/t Ag, 0.15g/t Au  
5.99m @ 8.17% Zn, 4.33% Pb, 0.84% Cu, 25.36g/t Ag, 0.13g/t Au  
(refer ASX announcement dated 09 February 2022)  
12.45m @ 10.91% Zn 5.73% Pb, 1.15% Cu, 331.63g/t Ag and 1.50g/t Au  
(refer ASX announcement dated 11 January 2022)

***1Sovereign Gold Company and Force Commodities Limited – ASX Announcements***

11.3m @ 15.18% Zn, 8.02% Pb, 597g/t Ag, 1.61% Cu from hole SG-03

(refer ASX announcement dated 15 December 2016)  
11.2m @ 19.71% Zn, 10.77 % Pb, 134.96 g/t Ag, 0.8% Cu from hole SG-06  
(refer ASX announcement dated 29 December 2016)  
7.2m @ 20.19% Zn, 7.17 % Pb, 30.93gpt Ag, 0.66% Cu from hole SG-05  
(refer ASX announcement dated 29 December 2016)  
5.7m @ 9.44% Zn, 7.09% Pb, 155g/t Ag, 0.53% Cu from hole SG-03  
(refer ASX announcement dated 15 December 2016)

### ***<sup>2</sup>Precious Metal Resources Limited – ASX Announcements***

37.2m @ 8.7% Zn, 3.0% Pb, 85g/t Ag, 1.4% Cu from hole DDH HP 026  
(refer to ASX announcement dated 03 January 2014)  
7.45m @ 8.88% Zn, 3.11% Pb, 22 g/t Ag, 0.56% Cu from hole DDH HP 027  
(refer ASX announcement dated 15 January 2014)

*<sup>1,2</sup>The information required pursuant to listing rule 5.7 is included in ASX announcement dated 8 July 2021*

**This announcement has been approved for release by the Board of Directors.**

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### **EXPLORATION WORK – COMPETENT PERSONS STATEMENT**

The information in this ASX Announcement that relates to Exploration Results is based on information compiled by Mr Michael Leu, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Leu is a full-time employee of Critical Resources Limited. Mr Leu has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Leu consents to the inclusion in this ASX Announcement of the matters based on his information in the form and context in which it appears.

### **ABOUT CRITICAL RESOURCES LIMITED**

Critical Resources is a base metals and lithium exploration and development focused company headquartered in Perth, Western Australia and is listed on the Australian Securities Exchange (ASX:CRR). The Company has recently been undergoing a structured process of change at the Director and Executive level. These changes mark the commencement of a renewed focus by the Company on providing shareholder value through the exploration, development and advancement of the Company’s long held NSW assets, its newly acquired Lithium assets in Canada and also of its Copper assets in Oman.

### **FORWARD LOOKING STATEMENTS**

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future, environmental conditions including



extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

#### **NO NEW INFORMATION**

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

# Appendix 1: CRRDD21\_15 Assay Results

From (m)	To (m)	Interval (m)	Rec (m)	Assays					
				Sample No.	Ag (ppm)	Au (ppm)	Cu (%)	Pb (%)	Zn (%)
0.00	2.90	2.90	0.4						
2.90	8.20	5.30	2.8						
8.20	44.50	36.30	29.2						
44.50	44.90	0.40	0.5						
44.90	46.00	1.10	0.8						
46.00	47.30	1.30	1.1						
47.30	48.90	1.60	1.2						
48.90	55.50	6.60	5.3						
55.50	57.30	1.80	0.8						
57.30	60.30	3.00	2.4						
60.30	70.00	9.70	9.5						
70.00	74.20	4.20	4						
74.20	74.70	0.50	0.3						
74.70	75.80	1.10	1.1	42750	3.27	0.03	0.003	0.006	0.026
75.80	77.30	1.50	1.1	42751	6.86	0.02	0.005	0.008	0.041
77.30	79.30	2.00	2	42752	7.78	0.01	0.007	0.009	0.033
79.30	81.30	2.00	2	42753	7.35	0.02	0.007	0.012	0.032
81.30	83.30	2.00	2	42754	9.75	0.04	0.008	0.015	0.032
83.30	85.30	2.00	2	42755	3.85	0.03	0.006	0.010	0.037
85.30	87.30	2.00	1.9	42756	6.12	0.07	0.010	0.024	0.047
87.30	89.30	2.00	1.9	42757	8.09	0.09	0.014	0.055	0.099
89.30	91.30	2.00	2	42758	3.5	0.07	0.008	0.017	0.020
91.30	93.30	2.00	2	42759	3.96	0.04	0.007	0.027	0.049
93.30	95.30	2.00	2	42760	4.9	0.02	0.008	0.017	0.022
95.30	97.30	2.00	1.9	42761	3.91	0.04	0.007	0.019	0.026
97.30	98.30	1.00	0.9	42762	5.57	0.03	0.009	0.023	0.016
98.30	100.35	2.05	2.05	42763	7.06	0.04	0.009	0.028	0.028
100.35	102.30	1.95	1.95	42764	6.41	0.03	0.007	0.031	0.043
102.30	104.30	2.00	1.9	42765	6.72	0.04	0.008	0.029	0.042
104.30	106.30	2.00	1.9	42766	7.58	0.03	0.007	0.026	0.030
106.30	108.30	2.00	2	42767	7.24	0.03	0.007	0.024	0.022
108.30	110.30	2.00	2	42768	8.92	0.03	0.008	0.034	0.026
110.3	111.3	1.00	1	42769	14.25	0.03	0.010	0.023	0.032
111.30	112.90	1.60	1.6	42770	31.4	0.05	0.020	0.036	0.066

## Appendix 2: CRRDD21\_16 Assay Results

From (m)	To (m)	Interval (m)	Rec (m)	Assays					
				Sample No.	Ag (ppm)	Au (ppm)	Cu (%)	Pb (%)	Zn (%)
0.00	2.90	2.90	0.3						
2.90	6.20	3.30	0.8						
6.20	7.00	0.80	0.5						
7.00	12.30	5.30	4.3						
12.30	17.20	4.90	2.5						
17.20	25.00	7.80	7.4						
25.00	26.40	1.40	1.3						
26.40	27.30	0.90	0.7						
27.30	36.30	9.00	8.9						
36.30	37.10	0.80	0.8	42771	16.35	0.07	0.009	0.038	0.041
37.10	37.50	0.40	0.3	42772	25.4	0.07	0.033	0.310	0.512
37.50	38.10	0.60	0.4	42773	19.5	0.04	0.063	0.987	1.940
38.10	39.20	1.10	1.1	42774	5.48	0.02	0.007	0.017	0.051
39.20	41.50	2.30	2.2						
41.50	43.70	2.20	1.9						
43.70	49.80	6.10	5.1						
49.80	52.50	2.70	2.5						
52.50	54.50	2.00	1.9	42775	3.63	0.04	0.005	0.060	0.194
54.50	56.30	1.80	1.7	42776	2.06	0.01	0.010	0.141	0.272
56.30	57.50	1.20	1.2	42777	3.53	0.03	0.056	0.264	0.772
57.50	59.00	1.50	1.4	42778	0.66	0.01	0.002	0.018	0.047
59.00	60.50	1.50	1.5	42779	0.73	0.01	0.002	0.005	0.038
60.50	62.00	1.50	1.5	42780	1.04	0.01	0.009	0.031	0.238
62.00	63.00	1.00	1	42781	5.98	0.02	0.165	1.365	2.760
63.00	64.00	1.00	0.9	42782	8.51	0.02	0.120	1.480	3.370
64.00	65.60	1.60	1.5	42783	3.13	0.01	0.021	0.356	1.000
65.60	66.30	0.70	0.6	42784	6.31	0.05	0.316	0.410	12.250
66.30	66.90	0.60	0.6	42785	6.74	0.04	0.735	0.029	14.900
66.90	68.50	1.60	1.6	42786	4.47	0.05	0.139	0.306	4.140
68.50	68.90	0.40	0.4	42787	23.1	0.07	0.552	5.260	15.100
68.90	69.60	0.70	0.7	42788	15.65	0.03	0.072	3.550	5.580
69.60	70.90	1.30	1.3	42789	6.58	0.06	0.020	0.306	0.578
70.90	72.60	1.70	1.6	42790	3.17	0.04	0.008	0.053	0.092
72.60	74.50	1.90	1.7	42791	3.59	0.04	0.011	0.056	0.074
74.50	75.50	1.00	1	42792	5.53	0.08	0.019	0.077	0.179
75.50	77.00	1.50	1.5	42793	6.83	0.05	0.010	0.050	0.068
77.00	78.00	1.00	1	42794	3.67	0.09	0.013	0.086	0.183
78.00	79.30	1.30	1.3	42795	5.38	0.07	0.049	0.297	0.423
79.30	80.30	1.00	1	42796	3.82	0.05	0.126	0.107	3.540
80.30	82.00	1.70	1.7	42797	2.61	0.07	0.018	0.013	0.026
82.00	83.10	1.10	1.1	42798	6.71	0.07	0.079	0.567	1.045
83.10	84.20	1.10	1.1	42799	4.03	0.07	0.031	0.236	0.538
84.20	85.40	1.20	1.2	42800	2.22	0.06	0.005	0.015	0.017
85.40	86.50	1.10	1.1	42801	2.06	0.02	0.003	0.009	0.021
86.50	87.90	1.40	1.4	42802	4.7	0.04	0.026	0.118	0.195
87.90	89.00	1.10	1.1	42803	2.2	0.04	0.005	0.018	0.038
89.00	90.50	1.50	1.5	42804	1.67	0.02	0.003	0.008	0.014
90.50	91.70	1.20	1.2	42805	1.01	<0.01	0.002	0.005	0.009
91.70	93.00	1.30	1.3	42806	0.33	<0.01	0.002	0.004	0.005
93.00	96.3	3.30	3.3						
96.30	97.10	0.80	0.8	42807	7.67	0.09	0.021	0.090	0.171
97.10	98.00	0.90	0.9	42808	2.26	0.04	0.003	0.026	0.080
98.00	98.80	0.80	0.8	42809	24.2	0.21	0.062	0.174	0.408
98.80	99.90	1.10	1.1	42810	60.1	0.39	0.631	1.625	2.950
99.90	100.50	0.60	0.6	42811	115	0.17	0.908	1.615	2.700
100.5	102.5	2.00	2	42812	353	0.31	0.594	0.634	1.960
102.5	103.9	1.40	1.4	42813	27.7	0.34	0.008	0.021	0.053
103.9	107.00	3.10	3.1						
107.00	108.30	1.30	1.3	42814	31.8	0.63	0.010	0.023	0.086
108.30	109.00	0.70	0.7	42815	58.3	0.3	0.140	0.262	0.476
109.00	110.60	1.60	1.4	42816	43.1	0.93	0.047	0.214	0.450
110.60	111.90	1.30	1.3	42817	44.2	0.21	0.320	0.674	1.275
111.90	112.50	0.60	0.6	42818	158	0.16	1.315	2.210	5.840
112.50	113.10	0.60	0.6	42819	91	0.07	0.270	0.657	1.475
113.10	113.40	0.30	0.3	42820	5.31	0.05	0.017	0.016	0.023
113.40	114.40	1.00	1	42821	8.45	0.03	0.018	0.077	0.117
114.00	115.50	1.50	1.5	42822	102	0.09	0.126	0.418	0.667

115.50	117.50	2.00	2	42823	57.3	0.11	0.060	0.099	0.202
117.50	119.40	1.90	1.6	42824	11.75	0.03	0.004	0.008	0.030
119.40	121.30	1.90	1.7	42825	7.1	0.05	0.011	0.053	0.124
121.30	122.30	1.00	1	42826	97	0.58	0.070	0.161	0.397
122.30	123.30	1.00	1	42827	219	0.53	0.519	1.280	2.320
123.30	124.30	1.00	1	42828	86.9	0.61	0.159	0.325	0.821
124.30	125.40	1.10	1.1	42829	30.6	0.12	0.053	0.155	0.304
125.00	127.90	2.90	2.1						
127.90	128.70	0.80	0.5						
128.70	131.00	2.30	1.9						
131.00	132.30	1.30	0.7						
132.30	133.00	0.70	0.7	42830	7.5	0.16	0.008	0.033	0.260
133.00	134.40	1.40	0.9	42831	30.4	0.07	0.998	2.530	1.390
134.40	135.00	0.60	0.6	42832	71.9	0.1	6.190	2.670	0.657
135.00	136.20	1.20	1.1	42833	5.59	0.03	0.058	0.180	0.061
136.20	137.10	0.90	0.7	42834	1.61	0.03	0.057	0.473	0.132
137.10	138.10	1.00	0.9	42835	0.5	0.01	0.034	0.078	0.128
138.10	139.10	1.00	0.9	42836	0.63	0.01	0.021	0.033	0.118
139.10	143.00	3.90	6.8						
143.00	144.30	1.30	1.2	42837	4.31	0.18	0.005	0.008	0.104
144.30	145.00	0.70	0.7	42838	182	0.23	0.093	0.825	1.300
145.00	146.00	1.00	1	42839	8.28	0.11	0.009	0.071	0.176
146.00	147.50	1.50	1.5	42840	3.21	0.01	0.047	0.078	0.171
147.50	148.50	1.00	1	42841	13.85	0.06	0.522	1.925	3.190
148.50	149.50	1.00	0.7	42842	22.3	0.08	0.276	3.580	7.570
149.50	151.30	1.80	1.5	42843	1.62	0.02	0.073	0.030	0.134
151.30	152.00	0.70	0.1						
152.00	152.50	0.50	0.4	42844	6.44	0.07	0.110	0.365	1.570
152.50	153.30	0.80	0.8	42845	1.96	0.06	0.006	0.036	0.262
153.30	154.70	1.40	0.5	42846	2.68	0.05	0.034	0.093	0.235
154.70	156.00	1.30	1.3	42847	5.6	0.12	0.008	0.059	0.142
156.00	157.50	1.50	1.5	42848	3.67	0.1	0.006	0.094	0.322
157.50	158.00	0.50	0.5	42849	5.98	0.07	0.080	1.115	1.775
158.00	159.00	1.00	1	42850	2.41	0.15	0.004	0.041	0.153
159.00	160.00	1.00	1	42851	3.02	0.12	0.008	0.025	0.087
160.00	161.00	1.00	1	42852	3.6	0.09	0.008	0.013	0.086
161.00	162.30	1.30	1.1	42853	3.99	0.07	0.028	0.286	0.996
162.30	163.20	0.90	0.9	42854	6.12	0.08	0.048	0.269	0.717
163.20	164.20	0.10	0.6	42855	13.85	0.2	1.555	6.060	12.600
164.20	165.10	0.90	0.8	42856	78.8	0.74	1.910	6.470	12.850
165.10	166.30	1.20	1	42857	83.5	0.13	2.350	2.140	3.660
166.30	167.00	0.70	0.6	42858	3.19	0.03	0.042	0.190	0.134
167.00	168.00	1.00	1	42859	20.7	0.04	0.168	0.172	0.443
168.00	169.00	1.00	1	42860	6.37	0.1	0.013	0.036	0.083
169.00	170.40	1.40	1.4	42861	0.46	<0.01	0.003	0.005	0.016
170.40	170.90	0.50	0.5	42862	0.43	<0.01	0.002	0.004	0.009
170.90	171.70	0.80	0.8	42863	0.31	<0.01	0.002	0.003	0.009
171.70	173.60	1.90	1.9	42864	1.62	0.01	0.003	0.010	0.021
173.60	175.20	1.60	1.6						
175.00	181.40	6.40	6.4						
181.40	182.60	1.20	1.2						
182.60	187.40	4.80	4.8						
187.40	190.90	3.50	3.5						
190.90	191.40	0.50	0.5						
191.40	192.40	1.00	1						
192.40	213.50	21.10	21.1						
213.50	215.00	1.50	1.5						
215.00	226.00	11.00	11						
226.00	226.80	0.80	0.8						
226.80	234.50	7.70	7.7						
234.50	236.40	1.90	1.9						
236.40	237.20	0.80	0.8						
237.20	239.20	2.00	2						
239.20	240.80	1.60	1.6						
240.80	240.90	0.10	1						
240.90	243.40	2.50	2.5						
243.40	244.30	0.90	0.9						

# Appendix 3: JORC Table 1 –CRRDD21\_15 Exploration Results

## 1.1 Section 1: Sampling Techniques and Data

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

Criteria	JORC-Code Explanation	Commentary
Sampling techniques	<i>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.</i>	<ul style="list-style-type: none"> <li>• Oriented NQ core was cut in half using a diamond saw, with a half core sent for assay and half core retained.</li> <li>• No other measurement tools other than directional survey tools have been used in the holes at this stage.</li> </ul>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<ul style="list-style-type: none"> <li>• Oriented core was placed V-rail and a consistent cut-line drawn along core to ensure cutting (halving) of representative samples</li> </ul>
	<i>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.</i>	<ul style="list-style-type: none"> <li>• Core sample interval was based in logged mineralisation</li> <li>• Determination of mineralisation has been based on geological logging and photo analysis.</li> <li>• Diamond Core drilling was used to obtain 3m length samples from the barrel which are then marked in one meter intervals based on the drillers core block measurement.</li> <li>• Assay samples will be selected based on geological logging boundaries or on the nominal meter marks.</li> <li>• Samples will be dispatched to an accredited laboratory (ALS) in Brisbane, Australia for sample preparation and shipment to analysis</li> </ul>
Drilling techniques	<i>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).</i>	<ul style="list-style-type: none"> <li>• NQ2 diamond double tube coring by Sandvik DE710 rig was used throughout the hole.</li> <li>• Core orientation was carried out by the drilling contractor.</li> </ul>

Criteria	JORC-Code Explanation	Commentary
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<ul style="list-style-type: none"> <li>• <i>Lithological logging, photography</i></li> <li>• <i>Core samples were measured with a standard tape within the core trays. Length of core was then compared to the interval drilled, and any core loss was attributed to individual rock units based on the amount of fracturing, abrasion of core contacts, and the conservative judgment of the core logger.</i></li> <li>• <i>Results of core loss are discussed below.</i></li> </ul>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> <li>• <i>Experienced driller contracted to carry out drilling.</i></li> <li>• <i>In broken ground the driller produced NQ core from short runs to maximise core recovery.</i></li> <li>• <i>Core was washed before placing in the core trays.</i></li> </ul>
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<ul style="list-style-type: none"> <li>• <i>Core was assessed by eye before cutting to ensure representative sampling.</i></li> <li>• <i>See "Aspects of the determination of mineralisation that are Material to the Public Report" above.</i></li> </ul>
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	<ul style="list-style-type: none"> <li>• <i>Core samples were not geotechnically logged.</i></li> <li>• <i>Core samples have been geologically logged to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> </ul>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<ul style="list-style-type: none"> <li>• <i>The core logging was qualitative in nature.</i></li> <li>• <i>All core was photographed</i></li> </ul>
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> <li>• <i>Total depth of the hole was 112.9m</i></li> <li>• <i>100% of the relevant intersections were logged.</i></li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether</i>	<ul style="list-style-type: none"> <li>• <i>Oriented core was placed V-rail and a consistent cut-line drawn along core to ensure cutting (halving) of representative samples</i></li> <li>• <i>Oriented NQ core was cut in half using a diamond saw, with a half core sent for assay and half core retained.</i></li> <li>• <i>Core sample intervals were based in logged mineralisation</i></li> <li>• <i>No duplicates or second half-sampling</i></li> </ul>
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	

Criteria	JORC-Code Explanation	Commentary
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<ul style="list-style-type: none"> <li>• <i>Appropriate method: oriented NQ core cut in half using a diamond saw, with a half core sent for assay and half core retained.</i></li> </ul>
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<ul style="list-style-type: none"> <li>• <i>Assays methods appropriate for style of mineralisation: ME-MS61 0.25g sample for 48 Elements and Gold by method Au-AA25 30g sample. Samples have been sent to highly accredited Australian Laboratory Services (ALS)</i></li> </ul>
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	
	<i>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.</i>	
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<ul style="list-style-type: none"> <li>• <i>No independent verification completed at this stage</i></li> <li>• <i>The reported hole is not a twin of any previous hole</i></li> <li>• <i>Core measured, photographed and logged by geologists. Digitally recorded plus back-up records.</i></li> <li>• <i>Assay data presented in this report</i></li> </ul>
	<i>The use of twinned holes.</i>	
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	
	<i>Discuss any adjustment to assay data.</i>	
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	<ul style="list-style-type: none"> <li>• <i>Drill collars recorded with Garmin GPS that has an accuracy in the order of <math>\pm 3</math> metres for location. A registered surveyor will be contracted to accurately survey all drill collars at completed of drill program.</i></li> <li>• <i>MGA94 (Zone 56)</i></li> <li>• <i>Topographic control based on Department of Lands digital terrain model.</i></li> </ul>
	<i>Specification of the grid system used.</i>	
	<i>Quality and adequacy of topographic control.</i>	
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral</i>	

Criteria	JORC-Code Explanation	Commentary
	<p><i>Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not relevant to current drilling.</i></li> </ul>
	<p><i>Whether sample compositing has been applied.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not relevant to current drilling.</i></li> <li>• <i>Core sample intervals were based in logged mineralisation and no sample compositing applied. Reporting of final results includes many weighted average- compositing of assay data.</i></li> </ul>
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known considering the deposit type</i></p>	<ul style="list-style-type: none"> <li>• <i>The orientation of the mineralisation is unknown. The drilling program is aimed at determining orientation of the base of mineralisation by drilling three holes.</i></li> </ul>
	<p><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></p>	<ul style="list-style-type: none"> <li>• <i>It is uncertain whether sampling bias has been introduced, or whether the thickness drilled is a true thickness.</i></li> </ul>
<b>Sample security</b>	<p><i>The measures taken to ensure sample security.</i></p>	<ul style="list-style-type: none"> <li>• <i>Core samples will be stored at the Gibsons core yard before express overnight freight to Australian Laboratory Services Pty. Ltd. (ALS) Brisbane. Sample movements and security documented by ALS Chain of Custody.</i></li> </ul>
<b>Audits or reviews</b>	<p><i>The results of any audits or reviews of sampling techniques and data.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not undertaken at this stage</i></li> </ul>



## 2 Section 2: Reporting of Exploration Results

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

Criteria	JORC-Code Explanation	Commentary														
<b>Mineral tenement and land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	<ul style="list-style-type: none"> <li>• The Halls Peak Project comprises granted Exploration Licenses EL 4474 and EL 7679, located in north-eastern NSW and covering an area of about 84km<sup>2</sup>.</li> <li>• There are no known impediments to operate on the tenements</li> </ul>														
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	<ul style="list-style-type: none"> <li>• Tenure is current and in good standing</li> </ul>														
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>• Exploration for base metals and gold have been conducted at Halls Peak since 1896 when massive sulphide deposits were discovered by prospectors. There was some small-scale mining of deposits of copper, lead, zinc and silver ore on the east side of the Chandler River until 1916. According to Report 52 – The Geological Survey of New South Wales “In 1965, 1,600 tons of ore were mined to give 263 tons of lead, 450 tons of zinc, 46.3 tons of copper and 12523 oz of silver”. Following this several exploration campaigns were conducted until the mid-1980’s for massive sulphides and silver by major mining companies such as BHP Co. Ltd., Mt. Isa Mines Ltd., The Zinc Corporation Ltd., Halls Peak Australia Limited and Allstate Exploration N.L. but most work was hindered as none were able to secure tenure to the whole area. All of these work programs comprising drilling, geochemistry and geophysics have resulted in an immense body of data.</li> </ul>														
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>• Halls Peak is in the southern part of the New England Orogen, a belt of continental crust uplifted to form a mountainous region. Mineralisation is hosted in the Permian Halls Peak Volcanics, a sequence of felsic volcanic, volcanoclastic and sedimentary rocks that have been deformed and metamorphosed due to their formation in a rift setting. Sulphide mineralisation is stratiform with several massive sulphide bodies within broad zones of disseminated and stockwork sulphides. Massive sulphide bodies are generally moderate to steeply dipping and up to tens of metres across. The massive sulphides are often associated with sulphidic shale and siltstone within zones of stockwork and disseminated sulphides in sericite-quartz altered rocks. Sulphide mineralisation is dominated by sphalerite and galena, with minor amounts of chalcopyrite, pyrite and tetrahedrite. Metal grades in massive sulphides can average 3.5% Cu, 8% Pb, 24% Zn, 260g/t Ag and 0.42g/t Au.</li> </ul>														
<b>Drill hole Information</b>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill</i>	<table border="1"> <thead> <tr> <th>Hole ID</th> <th>Easting</th> <th>Northing</th> <th>RL</th> <th>Azimuth</th> <th>Dip</th> <th>To Depth (m)</th> </tr> </thead> <tbody> <tr> <td>CRR21DD_15</td> <td>407665.7</td> <td>6598009.8</td> <td>790.2</td> <td>360</td> <td>60</td> <td>112.9</td> </tr> </tbody> </table>	Hole ID	Easting	Northing	RL	Azimuth	Dip	To Depth (m)	CRR21DD_15	407665.7	6598009.8	790.2	360	60	112.9
	Hole ID		Easting	Northing	RL	Azimuth	Dip	To Depth (m)								
	CRR21DD_15		407665.7	6598009.8	790.2	360	60	112.9								
<i>easting and northing of the drill hole collar</i>																
<i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i>																

Criteria	JORC-Code Explanation	Commentary
	<p><i>dip and azimuth of the hole</i></p> <p><i>down hole length and interception depth</i></p> <p><i>hole length.</i></p> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not relevant</i></li> </ul>
<b>Data aggregation methods</b>	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• <i>Uncut</i></li> </ul>
	<p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p>	<ul style="list-style-type: none"> <li>• <i>All aggregate intercepts detailed on tables and in text are weighted averages.</i></li> </ul>
	<p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<ul style="list-style-type: none"> <li>• <i>None used</i></li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p>	<ul style="list-style-type: none"> <li>• <i>True width not currently known. All lengths are down-hole lengths and not true width.</i></li> </ul>
	<p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p>	<ul style="list-style-type: none"> <li>• <i>The precise geometry is not currently known but is being tested by the planned drilling, with diamond drill hole azimuths designed to drill normal to the interpreted mineralised structure.</i></li> </ul>
	<p><i>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').</i></p>	<ul style="list-style-type: none"> <li>• <i>Down-hole length reported, true width not known.</i></li> </ul>
<b>Diagrams</b>	<p><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></p>	<ul style="list-style-type: none"> <li>• <i>The drilling is aimed at clarifying the structure of the mineralisation.</i></li> </ul>

Criteria	JORC-Code Explanation	Commentary
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>• Representative reporting of all relevant grades is provided in tables to avoid misleading reporting of Exploration Results.</li> </ul>
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	<ul style="list-style-type: none"> <li>• Overview of exploration data leading to selection of drill targets provided.</li> <li>• There were no deleterious elements identified.</li> </ul>
<b>Further work</b>	<i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	<ul style="list-style-type: none"> <li>• Drill program totalling 6,400m to both verify historical drilling at Halls Peak but also to test deeper VTEM targets is underway.</li> </ul>

# Appendix 4: JORC Table 1 –CRRDD21\_16 Exploration Results

## 2.1 Section 1: Sampling Techniques and Data

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

Criteria	JORC-Code Explanation	Commentary
<b>Sampling techniques</b>	<i>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.</i>	<ul style="list-style-type: none"> <li>• Oriented NQ core was cut in half using a diamond saw, with a half core sent for assay and half core retained.</li> <li>• No other measurement tools other than directional survey tools have been used in the holes at this stage.</li> </ul>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<ul style="list-style-type: none"> <li>• Oriented core was placed V-rail and a consistent cut-line drawn along core to ensure cutting (halving) of representative samples</li> </ul>
	<i>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.</i>	<ul style="list-style-type: none"> <li>• Core sample interval was based in logged mineralisation</li> <li>• Determination of mineralisation has been based on geological logging and photo analysis.</li> <li>• Diamond Core drilling was used to obtain 3m length samples from the barrel which are then marked in one meter intervals based on the drillers core block measurement.</li> <li>• Assay samples will be selected based on geological logging boundaries or on the nominal meter marks.</li> <li>• Samples will be dispatched to an accredited laboratory (ALS) in Brisbane, Australia for sample preparation and shipment to analysis</li> </ul>
<b>Drilling techniques</b>	<i>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).</i>	<ul style="list-style-type: none"> <li>• NQ2 diamond double tube coring by Sandvik DE710 rig was used throughout the hole.</li> <li>• Core orientation was carried out by the drilling contractor.</li> </ul>

Criteria	JORC-Code Explanation	Commentary
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<ul style="list-style-type: none"> <li>• <i>Lithological logging, photography</i></li> <li>• <i>Core samples were measured with a standard tape within the core trays. Length of core was then compared to the interval drilled, and any core loss was attributed to individual rock units based on the amount of fracturing, abrasion of core contacts, and the conservative judgment of the core logger.</i></li> <li>• <i>Results of core loss are discussed below.</i></li> </ul>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> <li>• <i>Experienced driller contracted to carry out drilling.</i></li> <li>• <i>In broken ground the driller produced NQ core from short runs to maximise core recovery.</i></li> <li>• <i>Core was washed before placing in the core trays.</i></li> </ul>
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<ul style="list-style-type: none"> <li>• <i>Core was assessed by eye before cutting to ensure representative sampling.</i></li> <li>• <i>See "Aspects of the determination of mineralisation that are Material to the Public Report" above.</i></li> </ul>
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	<ul style="list-style-type: none"> <li>• <i>Core samples were not geotechnically logged.</i></li> <li>• <i>Core samples have been geologically logged to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> </ul>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<ul style="list-style-type: none"> <li>• <i>The core logging was qualitative in nature.</i></li> <li>• <i>All core was photographed</i></li> </ul>
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> <li>• <i>Total depth of the hole was 244.3m</i></li> <li>• <i>100% of the relevant intersections were logged.</i></li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether</i>	<ul style="list-style-type: none"> <li>• <i>Oriented core was placed V-rail and a consistent cut-line drawn along core to ensure cutting (halving) of representative samples</i></li> <li>• <i>Oriented NQ core was cut in half using a diamond saw, with a half core sent for assay and half core retained.</i></li> <li>• <i>Core sample intervals were based in logged mineralisation</i></li> <li>• <i>No duplicates or second half-sampling</i></li> </ul>
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	

Criteria	JORC-Code Explanation	Commentary
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<ul style="list-style-type: none"> <li>• <i>Appropriate method: oriented NQ core cut in half using a diamond saw, with a half core sent for assay and half core retained.</i></li> </ul>
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<ul style="list-style-type: none"> <li>• <i>Assays methods appropriate for style of mineralisation: ME-MS61 0.25g sample for 48 Elements and Gold by method Au-AA25 30g sample. Samples have been sent to highly accredited Australian Laboratory Services (ALS)</i></li> </ul>
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	
	<i>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.</i>	
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<ul style="list-style-type: none"> <li>• <i>No independent verification completed at this stage</i></li> <li>• <i>The reported hole is not a twin of any previous hole</i></li> <li>• <i>Core measured, photographed and logged by geologists. Digitally recorded plus back-up records.</i></li> <li>• <i>Assay data presented in this report</i></li> </ul>
	<i>The use of twinned holes.</i>	
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	
	<i>Discuss any adjustment to assay data.</i>	
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	<ul style="list-style-type: none"> <li>• <i>Drill collars recorded with Garmin GPS that has an accuracy in the order of <math>\pm 3</math> metres for location. A registered surveyor will be contracted to accurately survey all drill collars at completed of drill program.</i></li> <li>• <i>MGA94 (Zone 56)</i></li> <li>• <i>Topographic control based on Department of Lands digital terrain model.</i></li> </ul>
	<i>Specification of the grid system used.</i>	
	<i>Quality and adequacy of topographic control.</i>	
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral</i>	

Criteria	JORC-Code Explanation	Commentary
	<p><i>Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not relevant to current drilling.</i></li> </ul>
	<p><i>Whether sample compositing has been applied.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not relevant to current drilling.</i></li> <li>• <i>Core sample intervals were based in logged mineralisation and no sample compositing applied. Reporting of final results includes many weighted average- compositing of assay data.</i></li> </ul>
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type</i></p>	<ul style="list-style-type: none"> <li>• <i>The orientation of the mineralisation is unknown. The drilling program is aimed at determining orientation of the base of mineralisation by drilling three holes.</i></li> </ul>
	<p><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></p>	<ul style="list-style-type: none"> <li>• <i>It is uncertain whether sampling bias has been introduced, or whether the thickness drilled is a true thickness.</i></li> </ul>
<b>Sample security</b>	<p><i>The measures taken to ensure sample security.</i></p>	<ul style="list-style-type: none"> <li>• <i>Core samples will be stored at the Gibsons core yard before express overnight freight to Australian Laboratory Services Pty. Ltd. (ALS) Brisbane. Sample movements and security documented by ALS Chain of Custody.</i></li> </ul>
<b>Audits or reviews</b>	<p><i>The results of any audits or reviews of sampling techniques and data.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not undertaken at this stage</i></li> </ul>

### 3 Section 2: Reporting of Exploration Results

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

Criteria	JORC-Code Explanation	Commentary														
<b>Mineral tenement and land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	<ul style="list-style-type: none"> <li>• The Halls Peak Project comprises granted Exploration Licenses EL 4474 and EL 7679, located in north-eastern NSW and covering an area of about 84km<sup>2</sup>.</li> <li>• There are no known impediments to operate on the tenements</li> </ul>														
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	<ul style="list-style-type: none"> <li>• Tenure is current and in good standing</li> </ul>														
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>• Exploration for base metals and gold have been conducted at Halls Peak since 1896 when massive sulphide deposits were discovered by prospectors. There was some small-scale mining of deposits of copper, lead, zinc and silver ore on the east side of the Chandler River until 1916. According to Report 52 – The Geological Survey of New South Wales “In 1965, 1,600 tons of ore were mined to give 263 tons of lead, 450 tons of zinc, 46.3 tons of copper and 12523 oz of silver”. Following this several exploration campaigns were conducted until the mid-1980’s for massive sulphides and silver by major mining companies such as BHP Co. Ltd., Mt. Isa Mines Ltd., The Zinc Corporation Ltd., Halls Peak Australia Limited and Allstate Exploration N.L. but most work was hindered as none were able to secure tenure to the whole area. All of these work programs comprising drilling, geochemistry and geophysics have resulted in an immense body of data.</li> </ul>														
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>• Halls Peak is in the southern part of the New England Orogen, a belt of continental crust uplifted to form a mountainous region. Mineralisation is hosted in the Permian Halls Peak Volcanics, a sequence of felsic volcanic, volcanoclastic and sedimentary rocks that have been deformed and metamorphosed due to their formation in a rift setting. Sulphide mineralisation is stratiform with several massive sulphide bodies within broad zones of disseminated and stockwork sulphides. Massive sulphide bodies are generally moderate to steeply dipping and up to tens of metres across. The massive sulphides are often associated with sulphidic shale and siltstone within zones of stockwork and disseminated sulphides in sericite-quartz altered rocks. Sulphide mineralisation is dominated by sphalerite and galena, with minor amounts of chalcopyrite, pyrite and tetrahedrite. Metal grades in massive sulphides can average 3.5% Cu, 8% Pb, 24% Zn, 260g/t Ag and 0.42g/t Au.</li> </ul>														
<b>Drill hole Information</b>	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill</i>	<table border="1"> <thead> <tr> <th>Hole ID</th> <th>Eastings</th> <th>Northing</th> <th>RL</th> <th>Azimuth</th> <th>Dip</th> <th>To Depth (m)</th> </tr> </thead> <tbody> <tr> <td>CRR21DD_16</td> <td>407659</td> <td>65980085</td> <td>809</td> <td>130</td> <td>60</td> <td>244.3</td> </tr> </tbody> </table>	Hole ID	Eastings	Northing	RL	Azimuth	Dip	To Depth (m)	CRR21DD_16	407659	65980085	809	130	60	244.3
	Hole ID		Eastings	Northing	RL	Azimuth	Dip	To Depth (m)								
	CRR21DD_16		407659	65980085	809	130	60	244.3								
<i>easting and northing of the drill hole collar</i>																
<i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i>																



Criteria	JORC-Code Explanation	Commentary
	<p><i>dip and azimuth of the hole</i></p> <p><i>down hole length and interception depth</i></p> <p><i>hole length.</i></p> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	<ul style="list-style-type: none"> <li>• <i>Not relevant</i></li> </ul>
<b>Data aggregation methods</b>	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• <i>Uncut</i></li> </ul>
	<p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p>	<ul style="list-style-type: none"> <li>• <i>All aggregate intercepts detailed on tables and in text are weighted averages.</i></li> </ul>
	<p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<ul style="list-style-type: none"> <li>• <i>None used</i></li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p>	<ul style="list-style-type: none"> <li>• <i>True width not currently known. All lengths are down-hole lengths and not true width.</i></li> </ul>
	<p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p>	<ul style="list-style-type: none"> <li>• <i>The precise geometry is not currently known but is being tested by the planned drilling, with diamond drill hole azimuths designed to drill normal to the interpreted mineralised structure.</i></li> </ul>
	<p><i>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').</i></p>	<ul style="list-style-type: none"> <li>• <i>Down-hole length reported, true width not known.</i></li> </ul>
<b>Diagrams</b>	<p><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></p>	<ul style="list-style-type: none"> <li>• <i>The drilling is aimed at clarifying the structure of the mineralisation.</i></li> </ul>

Criteria	JORC-Code Explanation	Commentary
<b>Balanced reporting</b>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>• Representative reporting of all relevant grades is provided in tables to avoid misleading reporting of Exploration Results.</li> </ul>
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	<ul style="list-style-type: none"> <li>• Overview of exploration data leading to selection of drill targets provided.</li> <li>• There were no deleterious elements identified.</li> </ul>
<b>Further work</b>	<i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	<ul style="list-style-type: none"> <li>• Drill program totalling 6,400m to both verify historical drilling at Halls Peak but also to test deeper VTEM targets is underway.</li> </ul>