

05 April 2022

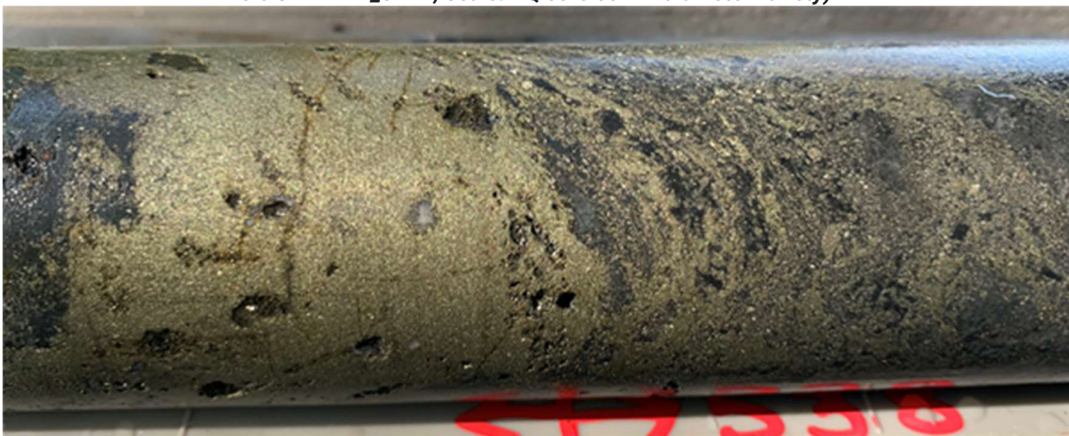
## **Assays Confirm Copper and Deep Disseminated Sulphide Mineralisation in Step Out Hole 11A at Gibsons**

Critical Resources Limited (ASX:CRR) ("Critical Resources" or the "Company"), is pleased to advise assays have confirmed Copper and Deep Disseminated Sulphide mineralisation in its seventh diamond drill hole CRR21DD\_11A (Hole 11A) of its drilling campaign at the Gibsons prospect, part of the broader Halls Peak project in New South Wales.

### **Highlights**

- **7.63m @ 1.15% Cu, 0.23% Zn, 0.01% Pb, 73.15g/t Ag, 0.01g/t Au from 42.04-49.67m downhole**
  - Including 0.75m @ 5.41% Cu, 0.61% Zn, 0.01% Pb, 234.37g/t Ag, 0.01g/t Au from 47.92-48.67m downhole
- **The presence of deep disseminated base metal sulphides to a depth of 360m indicates potential for the discovery of further massive sulphide lodes both laterally and at depth**
- **Hole 11A is a step-out hole and copper discovery represents a potentially new style of mineralisation in an area not previously drilled**
- **Approval from the Resources Regulator has been received for an additional three holes at Gibsons for a total of 1,200m**
- **Drilling designed to test the extent of copper mineralisation in Hole 11A and depth and extent of geophysical anomalies**
- **Cores from completed Holes 02, 02A, 04, 07A are currently being assayed with results expected progressively in the short term**

*Figure 1: Detail of sample 539 from 47.92-48.30m @ 6.89% Cu, 0.63% Zn, 0.1% Pb, 262g/t Ag and 0.02g/t Au part of larger interval of 7.63 metres (42.04-49.67m) downhole @ 1.15% Cu, 0.23% Zn, 0.01% Pb, 73.15g/t Ag, 0.01g/t Au (Diamond drill hole CRR21DD\_011A, Scale: NQ core 50mm diameter variety)*



Assays received from Hole 11A confirm copper mineralisation intersected in Hole 11A across 7.63 metres (42.04-49.67m) downhole @ 1.15% Cu, 0.23% Zn, 0.01% Pb, 73.15g/t Ag, 0.01g/t Au

1,200m of additional drilling aims to test the extent of the copper mineralisation seen in Hole 11A. Holes are also designed to test the depth and extent of geophysical anomalies consistent with the current exploration strategy at Halls Peak.

Critical Resources Managing Director Alex Biggs said: "Extension of the drilling campaign at Gibsons is confirmation that we see huge potential in the Halls Peak project as a whole. These additional holes will allow us to further delineate the chalcopyrite mineralisation we intersected in Hole 11A and test geophysical anomalies at depth. We are excited to test the potential of the Gibsons prospect further and look forward to adding to the already impressive results we have seen so far".

Significantly there were intervals of highly anomalous base metal mineralisation to 360m downhole Including:

- 3.36 metres (194.54-197.90m) downhole @ 0.07% Cu, 0.44% Zn, 0.07% Pb, 1.83g/t Ag and 0.02g/t Au, that included 0.12 metres downhole @ 1.05% Cu, 2.06% Zn, 0.007% Pb, 16.7g/t Ag and 0.08g/t Au, and
- 3.40 metres (356.60-360.00m) downhole @ 0.1% Cu , 0.94% Zn, 0.42%Pb 8.63g/t Ag and 0.01g/t Au

The presence of base metal sulphides to a depth of 360m significantly extends the down hole depth of the known base metal exhalative system and indicates potential for the discovery of further massive sulphide lodes both laterally and at depth.

Drilling at Halls Peak continues to expand areas of known mineralisation. Hole 11A has intersected intervals of sheeted veins and stockwork mineralisation containing chalcopyrite and pyrite downhole from 42.00 - 50.72m. Petrographic and geochemical studies are being undertaken to identify the causative mineral system of this potentially new style of mineralisation. Geophysical reinterpretation post drilling demonstrates that the surveyed drill hole passed close to a geophysical anomaly as shown in Figure 2. The purposed of the newly planned drill holes is to retest this anomaly and depth potential. Further detail of this strategy is shown in Figures 10, 11 and 12.

**Figure 2: Cross section of geophysical reinterpretation and Hole 11A drill hole survey**

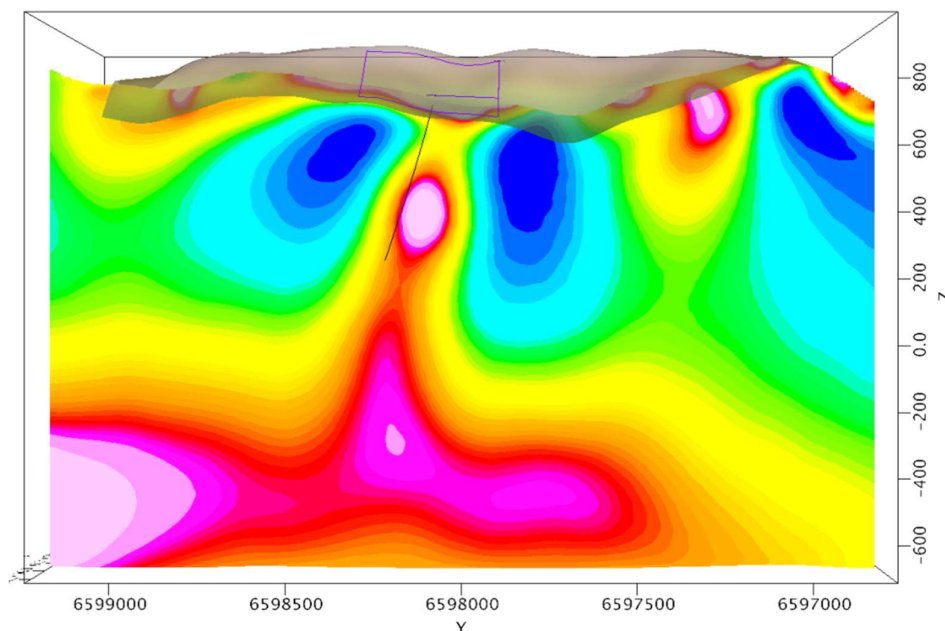




Figure 3: Detail of core (41.58 – 50.20m, core trays Trays 9 and 10,) with intervals of sheeted veins and stockwork mineralisation with visible chalcopyrite and pyrite. This core is part of the interval of 7.63 metres (42.04-49.67m) downhole @ 1.15% Cu, 0.23% Zn, 0.01% Pb, 73.15g/t Ag, 0.01g/t Au (Diamond drill hole CRR21DD\_011A, Scale: NQ core 50mm diameter variety)



Figure 4: Detail of core with intervals of visible chalcopyrite and lesser pyrite, from first three rows of tray 10 in Figure 3 above that extend downhole from 46.2-48.7m. Top row RHS has portion of sample 536 (46.52-46.74m @ 3.30% Cu, 0.27% Zn, 0.019% Pb, 199.0g/t Ag, 0.02g/t Au;) and bottom row LHS has sample 539 (47.92-48.30m @ 6.89% Cu, 0.63% Zn, 0.01% Pb, 262g/t Ag, 0.02g/t Au), (Diamond drill hole CRR21DD\_011A, Scale: NQ core 50mm diameter variety)





**Figure 5: Detail of core with intervals of sheeted veins and stockwork mineralisation with pyrite and lesser chalcopyrite, from first five rows of tray 9 in Figure 3 above (Diamond drill hole CRR21DD\_011A, Scale: NQ core 50mm diameter variety)**



**Figure 6: Half core from third row of above Figure 5, Sample 530 from 43.04-43.86m @ 1.61% Cu, 0.51% Zn, 0.03% Pb, 149g/t Ag, 0.02g/t Au. Note RHS sheeted, parallel vein, chalcopyrite at times is present towards the central portion of the sheeted veins with more pyrite towards the margin, this could be indicative of a later stage vein parting event by more copper-rich fluids. Note: Core is sawn in half:- half core sent for assay and half core retained for study and future JORC validation (Diamond drill hole CRR21DD\_011A, Scale: NQ core 50mm diameter variety)**



**Figure 7: Detail of core with intervals of sheeted veins and stockwork mineralisation with mostly pyrite and lesser chalcopyrite in the first two rows and chalcopyrite dominated wider vein in the 4<sup>th</sup> row; photo field part of downhole interval that extends from 43-47m (Diamond drill hole CRR21DD\_011A, Scale: NQ core 50mm diameter variety)**



**Figure 8: Half core from RHS of second and third row of Figure 7 above. Top row RHS has portion of sample 532 (44.92-45.15m @ 0.90% Cu, 0.12% Zn, 0.03% Pb, 44.90g/t Ag, 0.01g/t Au) and bottom row LHS has portion of sample 534 (45.60-46.09m @ 1.30% Cu, 0.28% Zn, 0.01%Pb, 113g/t Ag, 0.01g/t Au). Note first row RHS sheeted, parallel vein (at the 45m downhole measurement) has chalcopyrite towards the central portion of the veins with more pyrite towards the margin; note third row RHS sheeted, parallel vein (at the 46m downhole measurement) is dominated by chalcopyrite. Note: Core is sawn in half:- half core sent for assay and half core retained for study and future JORC validation. (Diamond drill hole CRR21DD\_011A, Scale: NQ core 50mm diameter variety)**

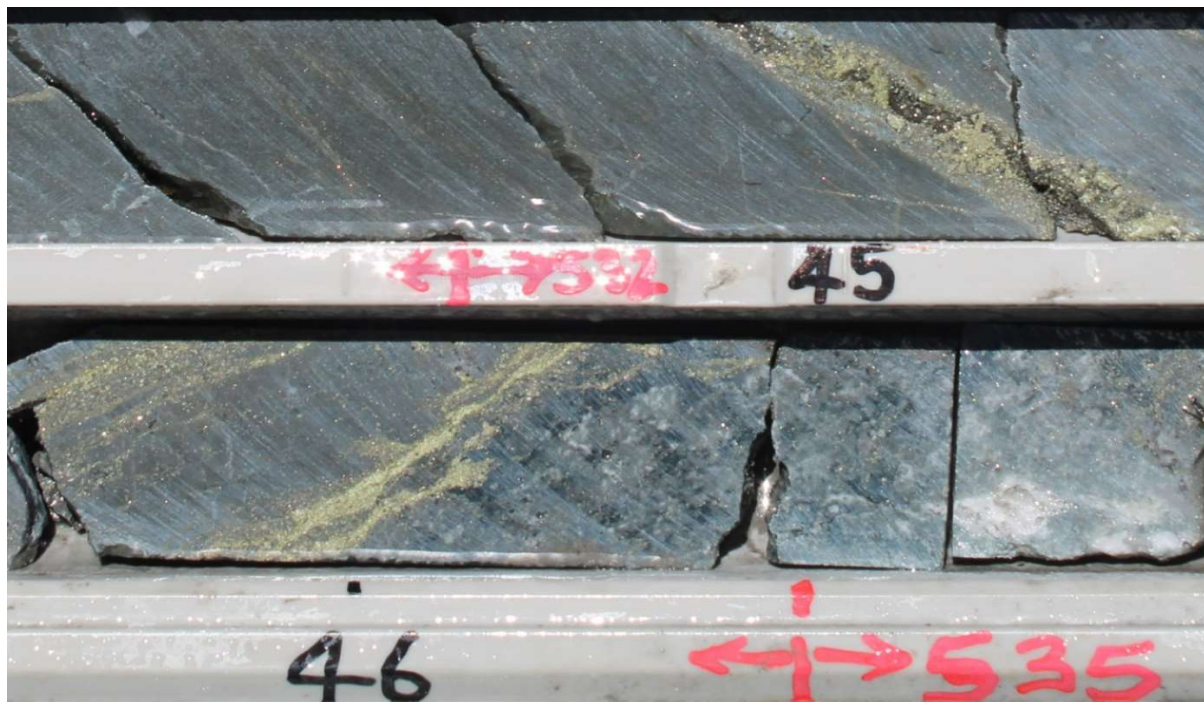
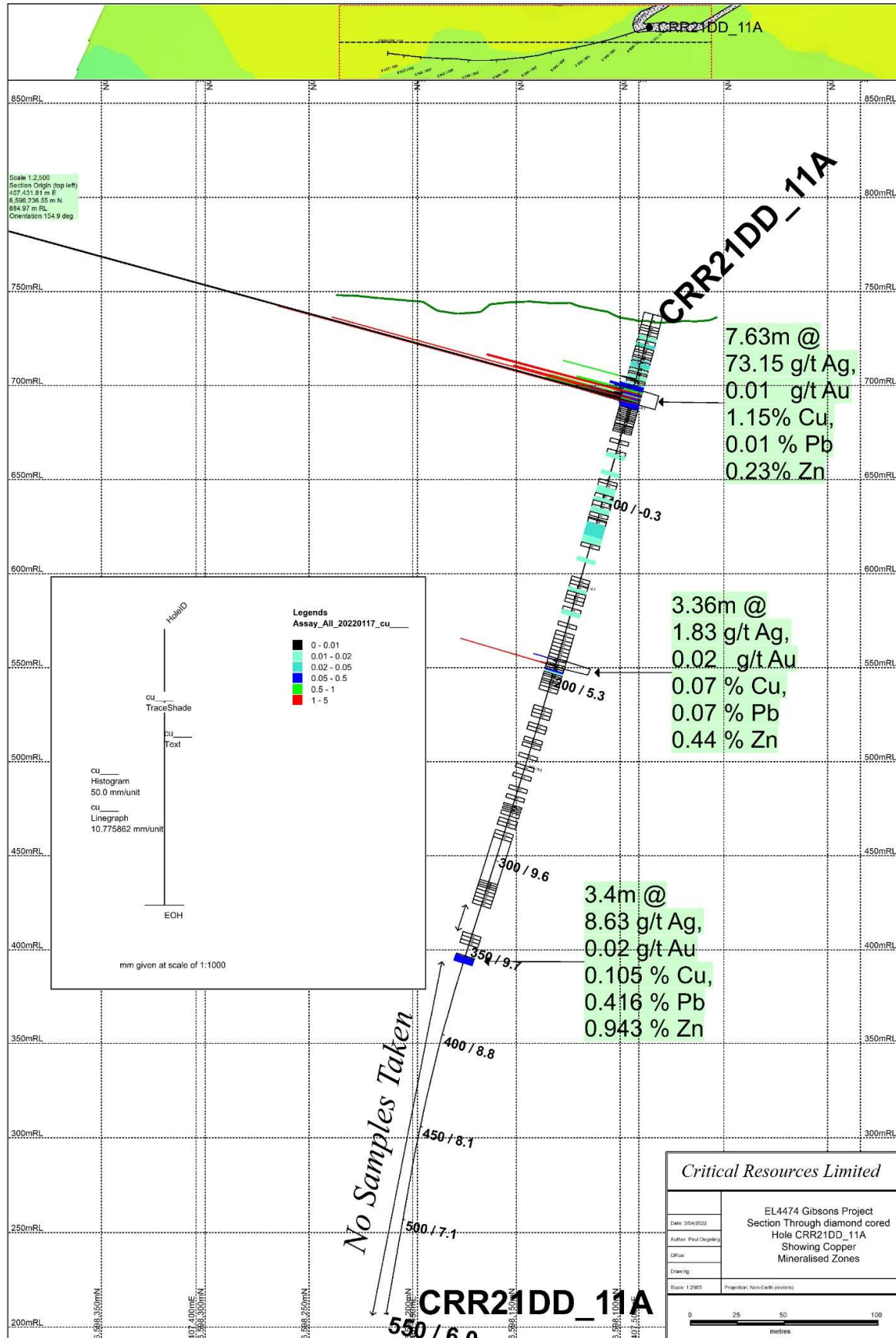




Figure 9: Hole 11A cross-section



**Figure 10: Additional planned drill holes (Cross-section)**

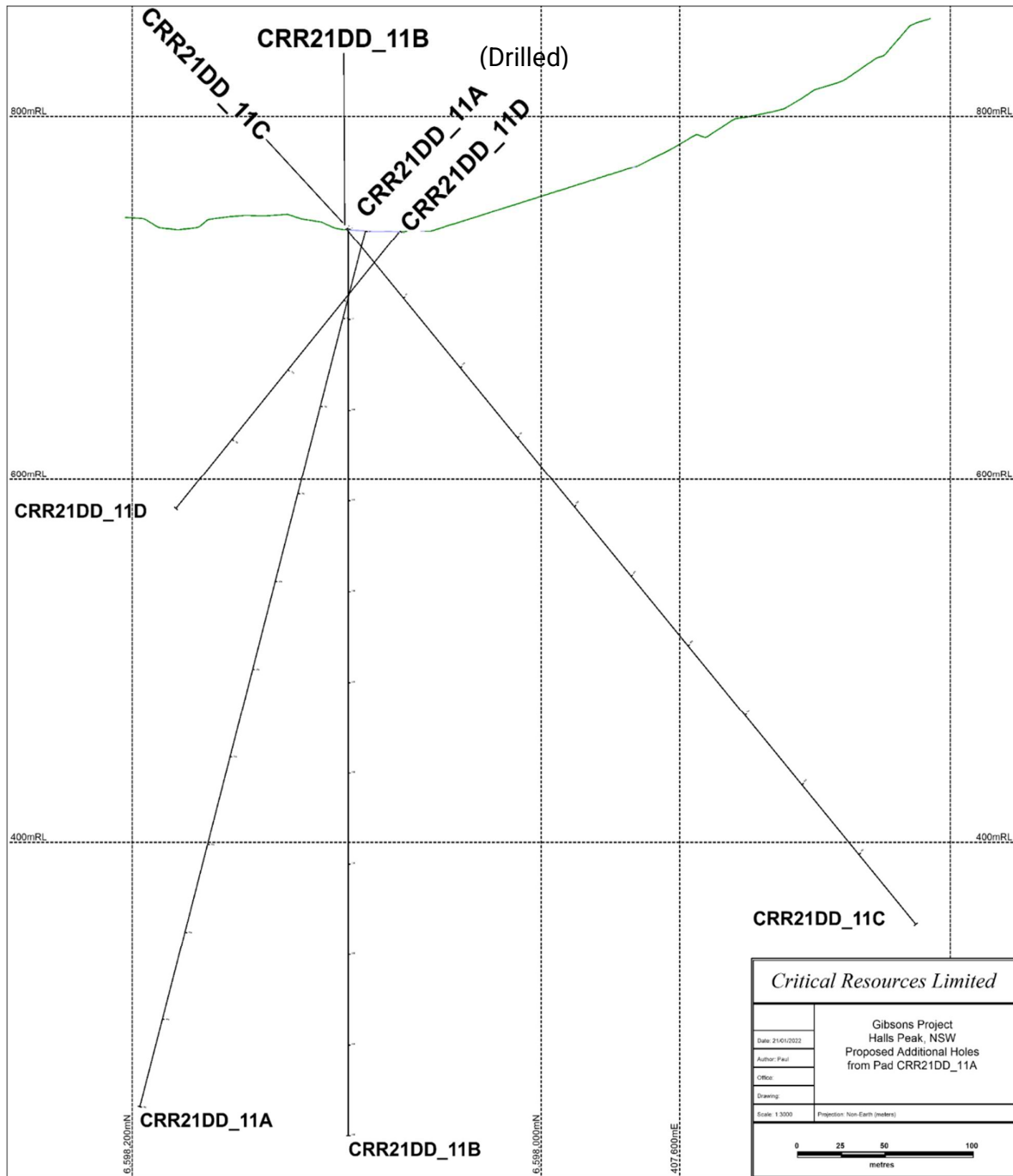


Figure 11: Additional drill holes (Plan view)

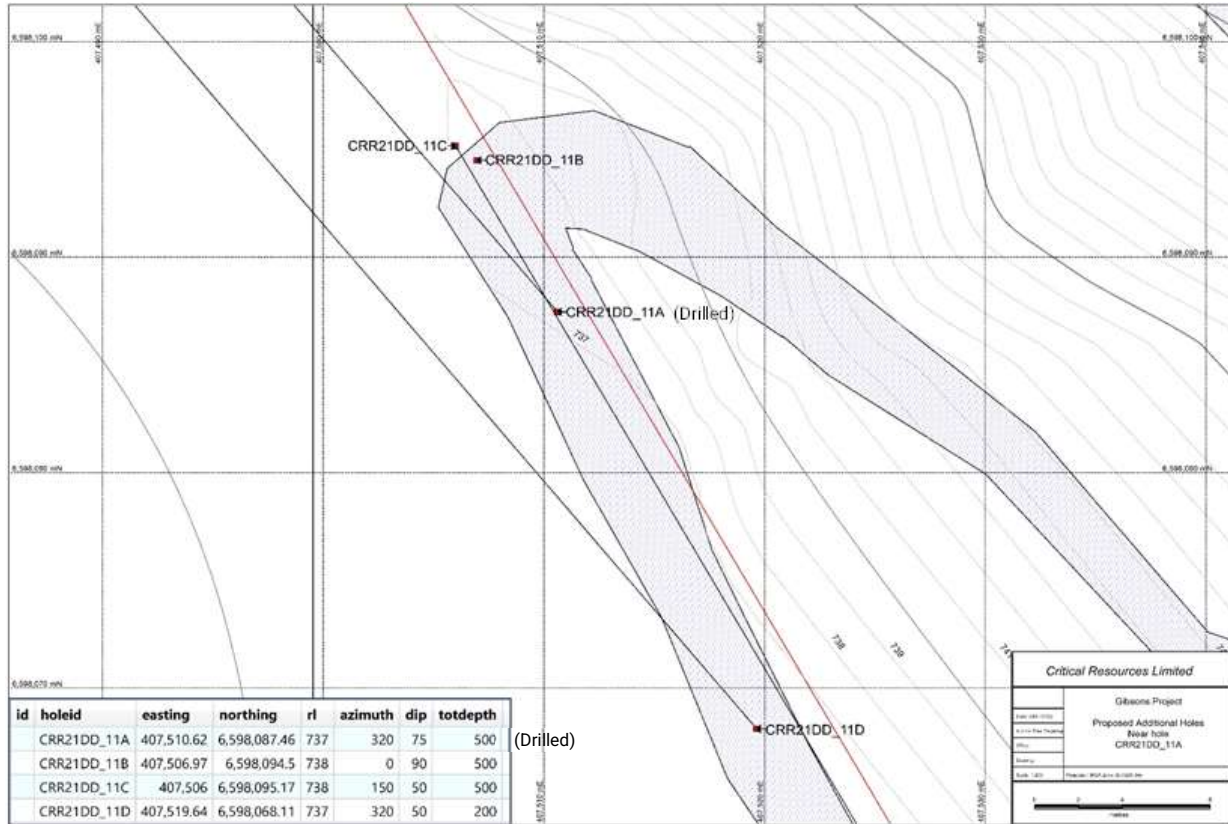
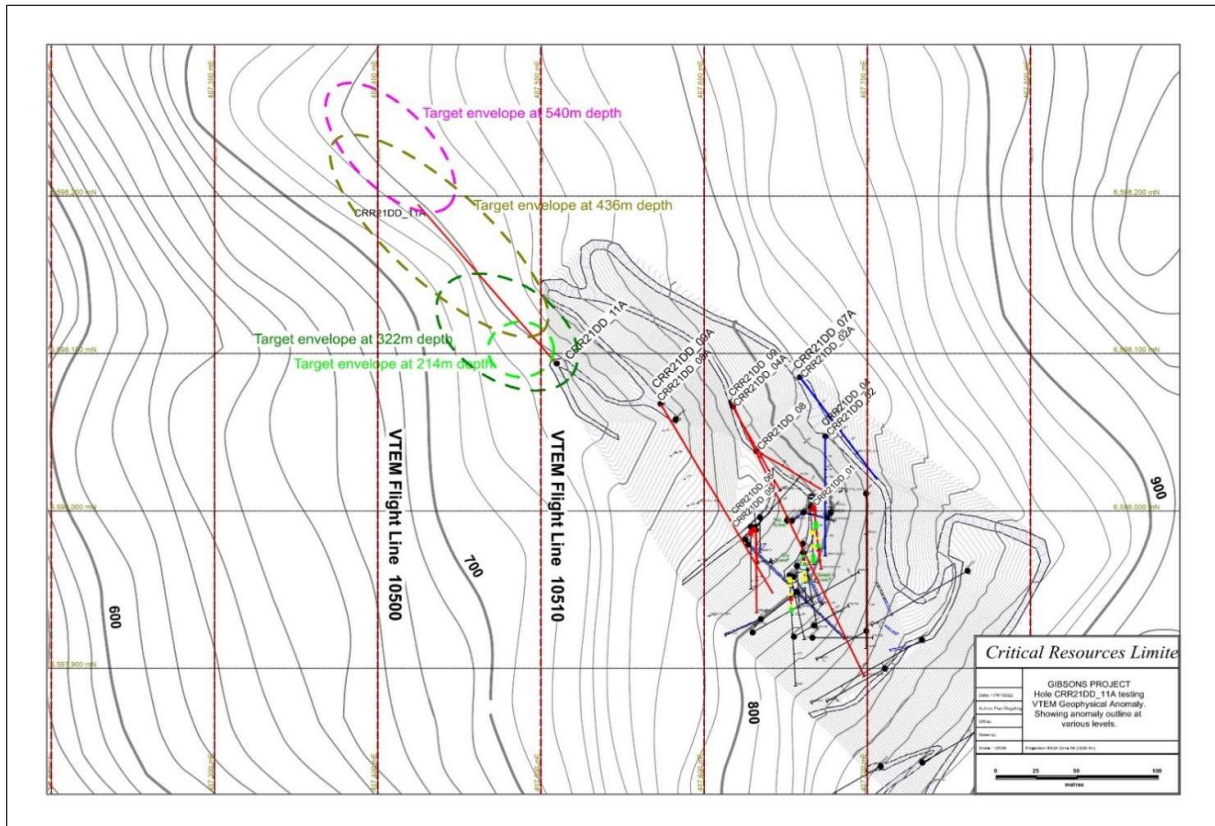


Figure 12: Gibsons project geophysical target outline at various levels (VTEM 2.5D processing)





## 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. More recent near surface exploration has been conducted by Precious Metal Resources Limited, Sovereign Gold Company Limited (now Critical Resources Limited) and Force Commodities Limited (now Critical Resources Limited) yielding high-grade intercepts. Some near surface historic mining has occurred around the Sunnyside prospect.

Previous drilling results includes:

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

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)

### **<sup>1</sup>Sovereign 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)

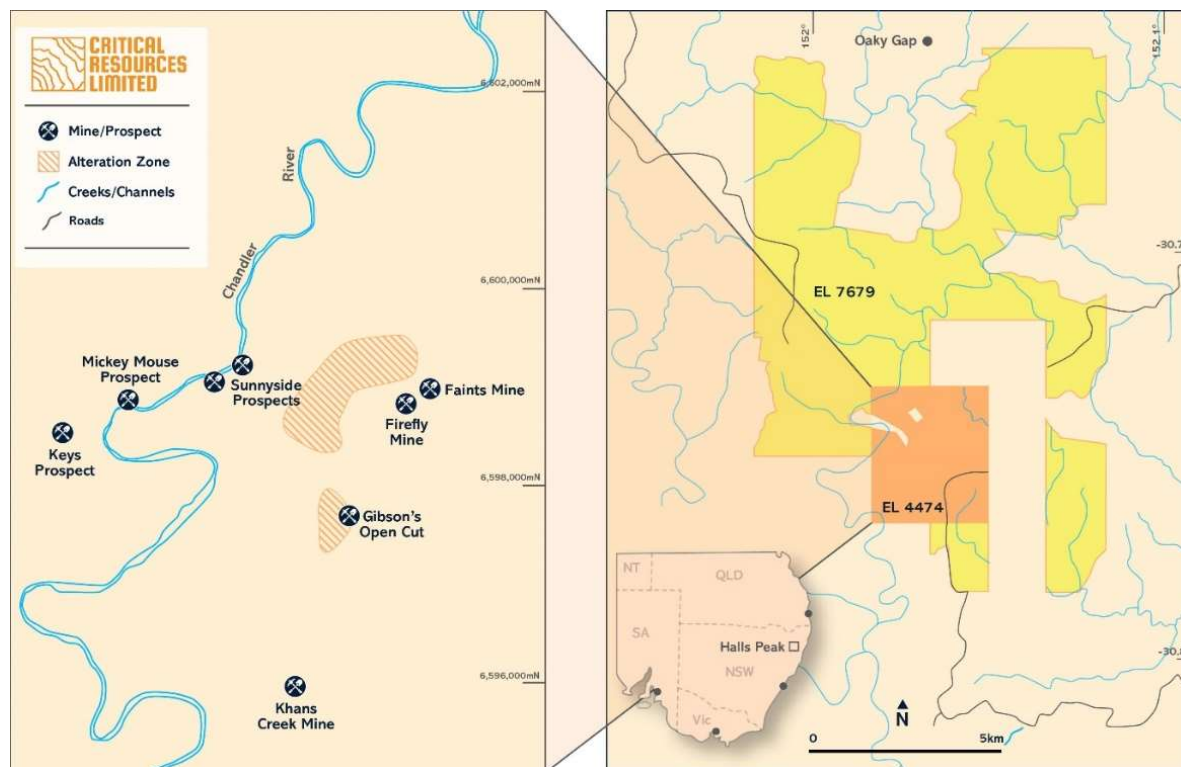
7.45m @ 8.88% Zn, 3.11% Pb, 22 g/t Ag, 0.56% Cu from hole DDH HP 027

(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 08 July 2021

Halls Peak is considered to have potential to contain world class deposits similar to those already being mined in north 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 13.

**Figure 13: Halls Peak project location**



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

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## **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.

## **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.



## **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: Assay Table for Hole 11A

From	To	Interval	Rec	Assays					
(m)	(m)	(m)	(m)	Assay No.	Ag (ppm)	Au (ppm)	Cu (%)	Pb (%)	Zn (%)
0.00	6.60	6.60	1.5	P384498	0.82	0.01	0.004	0.010	0.016
6.60	8.20	1.60	0.7	P384499	2.39	0.01	0.007	0.016	0.011
8.20	9.60	1.40	1.4	P384500	0.87	0.01	0.004	0.010	0.016
9.60	11.50	1.90	1.6	P384501	0.57	0.01	0.006	0.007	0.010
11.50	12.60	1.10	1.1	P384502	0.77	0.01	0.005	0.006	0.007
12.60	14.60	2.00	2	P384503	0.52	0.01	0.011	0.005	0.009
14.60	16.60	2.00	2	P384504	0.13	0.01	0.007	0.001	0.008
16.60	18.60	2.00	2	P384505	0.26	0.01	0.021	0.002	0.013
18.60	20.25	1.65	1.65	P384506	0.38	0.01	0.007	0.001	0.008
20.25	21.47	1.22	1.22	P384507	0.54	0.01	0.003	0.001	0.009
21.47	23.20	1.73	1.73	P384508	0.39	0.01	0.003	0.001	0.013
23.20	24.15	0.95	0.95	P384509	0.6	0.01	0.002	0.001	0.007
24.15	25.26	1.11	1.11	P384510	0.42	0.01	0.007	0.002	0.038
25.26	26.12	0.86	0.86	P384511	3.03	0.01	0.037	0.004	0.264
26.12	27.10	0.98	0.98	P384512	0.28	0.01	0.001	0.007	0.045
27.10	28.10	1.00	1	P384513	2.57	0.01	0.037	0.014	0.022
28.10	29.10	1.00	1	P384514	5.1	0.01	0.023	0.027	0.018
29.10	30.10	1.00	1	P384515	6.79	0.02	0.016	0.023	0.020
30.10	31.10	1.00	1	P384516	5.69	0.01	0.008	0.018	0.057
31.10	32.10	1.00	1	P384517	1.04	0.01	0.018	0.005	0.031
32.10	33.10	1.00	0.9	P384518	3.22	0.01	0.009	0.017	0.013
33.10	34.10	1.00	1	P384519	2.69	0.01	0.005	0.021	0.177
34.10	35.10	1.00	1	P384520	7.11	0.01	0.013	0.050	0.229
35.10	35.94	0.84	0.84	P384521	3.77	0.01	0.010	0.022	0.017
35.94	36.22	0.28	0.28	P384522	6.78	0.03	0.803	0.011	0.045
36.22	37.22	1.00	1	P384523	5.95	0.01	0.004	0.055	0.122
37.22	38.22	1.00	1	P384524	5.16	0.01	0.008	0.029	0.009
38.22	39.22	1.00	1	P384525	5.43	0.01	0.017	0.024	0.062
39.22	40.04	0.82	0.82	P384526	20	0.01	0.151	0.025	0.025
40.04	41.04	1.00	0.9	P384527	13.25	0.02	0.264	0.027	0.061
41.04	42.04	1.00	1	P384528	39.1	0.02	0.211	0.030	0.107
42.04	43.04	1.00	1	P384529	59.7	0.02	0.621	0.013	0.157
43.04	43.86	0.82	0.82	P384530	149	0.02	1.605	0.0337	0.514
43.86	44.92	1.06	1.06	P384531	26.6	0.01	0.118	0.020	0.257
44.92	45.15	0.23	0.23	P384532	44.9	0.01	0.894	0.030	0.120
45.15	45.60	0.45	0.45	P384533	14.15	0.01	0.042	0.011	0.035
45.60	46.09	0.49	0.49	P384534	113	0.02	1.300	0.015	0.279
46.09	46.52	0.43	0.43	P384535	19.95	0.01	0.456	0.012	0.056
46.52	46.74	0.22	0.22	P384536	199	0.02	3.300	0.019	0.267
46.74	47.18	0.44	0.44	P384537	7.6	0.01	0.133	0.004	0.029
47.18	47.92	0.74	0.74	P384538	37.7	0.01	0.936	0.005	0.147
47.92	48.30	0.38	0.38	P384539	262	0.02	6.890	0.010	0.632
48.30	48.67	0.37	0.37	P384540	206	0.01	3.890	0.016	0.595
48.67	49.67	1.00	1	P384541	16.65	0.01	0.115	0.007	0.031
49.67	50.72	1.05	1.05	P384542	7.89	0.01	0.109	0.018	0.027
50.72	51.72	1.00	1	P384543	10.8	0.01	0.089	0.021	0.026
51.72	52.72	1.00	1	P384544	1.1	0.01	0.008	0.002	0.012
52.72	53.72	1.00	1	P384545	0.53	0.01	0.002	0.001	0.013
53.72	54.72	1.00	1	P384546	2.05	0.01	0.002	0.010	0.016
54.72	55.72	1.00	1	P384547	0.97	0.01	0.001	0.003	0.012
55.72	56.72	1.00	1	P384548	0.62	0.01	0.001	0.003	0.019
56.72	57.63	0.91	0.91	P384549	0.35	0.01	0.000	0.001	0.029
57.63	58.33	0.70	0.7	P384550	1.02	0.01	0.001	0.008	0.053
58.33	59.33	1.00	1	P384551	0.64	0.01	0.001	0.003	0.028
59.33	60.92	1.59	1.59	P384552	1.15	0.01	0.000	0.025	0.025



60.92	61.36	0.44	0.44	P384553	2.19	0.01	0.002	0.027	0.042
61.36	62.36	1.00	1	P384554	0.52	0.01	0.001	0.003	0.036
62.36	63.36	1.00	1	P384555	0.75	0.01	0.010	0.001	0.032
63.36	64.36	1.00	1	P384556	0.07	0.01	0.003	0.000	0.023
64.36	65.36	1.00	1	P384557	0.07	0.01	0.003	0.000	0.025
65.36	69.36	4.00	4	P384558	0.13	0.01	0.007	0.001	0.019
69.36	71.36	2.00	2						
71.36	75.36	4.00	4						
75.36	77.36	2.00	2	P384559	0.2	0.01	0.005	0.001	0.013
77.36	79.36	2.00	2	P384560	0.22	0.01	0.017	0.001	0.024
79.36	87.00	7.64	7.64						
87.00	89.00	2.00	2	P384561	0.24	0.01	0.016	0.001	0.034
89.00	92.00	3.00	3						
92.00	93.71	1.71	1.71	P384562	0.13	0.01	0.00081	0.00065	0.0238
93.71	95.71	2.00	2	P384563	0.19	0.01	0.003	0.002	0.017
95.71	97.71	2.00	2	P384564	0.19	0.01	0.011	0.002	0.018
97.71	99.71	2.00	2	P384565	0.29	0.02	0.012	0.001	0.015
99.71	101.71	2.00	2	P384566	0.32	0.01	0.010	0.002	0.016
101.71	103.71	2.00	2	P384567	0.9	0.01	0.016	0.002	0.014
103.71	106.05	2.34	0.9	P384568	0.61	0.01	0.005	0.003	0.013
106.05	107.32	1.27	1.27	P384569	0.31	0.01	0.001	0.001	0.071
107.32	110.10	2.78	2.78	P384570	0.59	0.01	0.011	0.007	0.012
110.10	112.10	2.00	2	P384571	0.38	0.01	0.001	0.001	0.012
112.10	113.16	1.06	1.06						
113.16	113.80	0.64	0.64	P384572	0.11	0.01	0.00225	0.00074	0.005
113.80	115.80	2.00	2	P384573	0.25	0.01	0.00197	0.0012	0.0131
115.80	121.00	5.20	5.2						
121.00	123.00	2.00	0.9	P384574	0.53	0.01	0.030	0.001	0.014
123.00	125.00	2.00	2	P384575	0.35	0.01	0.011	0.001	0.018
125.00	127.00	2.00	2	P384576	0.9	0.01	0.017	0.001	0.032
127.00	129.00	2.00	2	P384577	0.4	0.01	0.001	0.001	0.027
129.00	135.00	6.00	6						
135.00	137.00	2.00	2	P384578	0.1	0.01	0.014	0.001	0.124
137.00	146.00	9.00	9						
146.00	148.00	2.00	2	P384579	0.07	0.01	0.003	0.002	0.036
148.00	149.94	1.94	1.94	P384580	0.12	0.01	0.003	0.001	0.030
149.94	151.94	2.00	2	P384581	0.18	0.01	0.009	0.002	0.025
151.94	153.94	2.00	2	P384582	0.18	0.01	0.010	0.003	0.050
153.94	155.94	2.00	2	P384583	0.38	0.02	0.004	0.003	0.042
155.94	157.94	2.00	2	P384584	0.52	0.01	0.009	0.026	0.127
157.94	159.94	2.00	2	P384585	0.24	0.01	0.005	0.003	0.114
159.94	162.52	2.58	2.58						
162.52	164.52	2.00	2	P384586	0.1	0.01	0.001	0.001	0.033
164.52	166.52	2.00	2	P384587	0.3	0.01	0.012	0.007	0.031
166.52	171.00	4.48	4.48						
171.00	173.00	2.00	2	P384588	0.35	0.01	0.001	0.002	0.030
173.00	176.00	3.00	3						
176.00	178.00	2.00	2	P384589	0.13	0.01	0.001	0.001	0.019
178.00	180.34	2.34	2.34	P384590	0.14	0.01	0.001	0.001	0.019
180.34	182.34	2.00	2	P384591	0.52	0.02	0.002	0.002	0.038
182.34	184.34	2.00	2	P384592	0.69	0.01	0.002	0.003	0.052
184.34	186.34	2.00	2	P384593	0.4	0.01	0.002	0.001	0.029
186.34	188.34	2.00	2	P384594	0.47	0.01	0.002	0.001	0.030
188.34	190.34	2.00	2	P384595	0.71	0.02	0.002	0.002	0.029
190.34	191.31	0.97	0.97	P384596	0.65	0.02	0.002	0.002	0.035
191.31	191.49	0.18	0.18	P384597	6.57	0.03	0.258	0.003	1.110
191.49	193.49	2.00	2	P384598	0.48	0.02	0.002	0.002	0.033
193.49	194.54	1.05	1.05	P384599	0.49	0.02	0.002	0.002	0.032
194.54	194.66	0.12	0.12	P384600	16.7	0.08	1.050	0.007	2.060
194.66	195.90	1.24	1.24	P384601	0.7	0.02	0.007	0.002	0.105
195.90	196.90	1.00	1	P384602	0.3	0.02	0.002	0.002	0.206

196.90	197.90	1.00	1	P384603	2.98	0.02	0.085	0.242	0.905
197.90	198.90	1.00	1	P384604	7.01	0.07	0.017	0.028	0.078
198.90	199.90	1.00	1	P384605	7.82	0.09	0.008	0.018	0.036
199.90	200.90	1.00	1	P384606	4.51	0.13	0.005	0.021	0.060
200.90	202.43	1.53	1.53	P384607	3.92	0.07	0.003	0.010	0.029
202.43	203.43	1.00	1	P384608	8.31	0.04	0.005	0.016	0.051
203.43	204.64	1.21	1.21	P384609	8.74	0.12	0.010	0.029	0.058
204.64	206.44	1.80	1.8	P384610	3.01	0.04	0.002	0.005	0.018
206.44	208.64	2.20	2.2	P384611	2.06	0.02	0.002	0.006	0.008
208.64	217.42	8.78	8.78						
217.42	219.42	2.00	2	P384612	0.14	0.01	0.002	0.003	0.013
219.42	221.42	2.00	2	P384613	1.84	0.02	0.002	0.004	0.014
221.42	223.42	2.00	2	P384614	1.96	0.02	0.001	0.002	0.009
223.42	227.00	3.58	3.58						
227.00	229.00	2.00	2	P384615	2.5	0.02	0.001	0.003	0.008
229.00	231.00	2.00	2	P384616	1.81	0.02	0.002	0.005	0.013
231.00	235.00	4.00	4						
235.00	237.00	2.00	2	P384617	1.66	0.01	0.005	0.003	0.019
237.00	238.00	1.00	1						
238.00	240.00	2.00	2	P384618	0.74	0.01	0.002	0.002	0.008
240.00	244.00	4.00	4						
244.00	246.00	2.00	2	P384619	0.08	0.01	0.001	0.002	0.006
246.00	250.00	4.00	4						
250.00	252.00	2.00	2	P384620	0.27	0.01	0.002	0.005	0.017
252.00	255.00	3.00	3						
255.00	257.00	2.00	2	P384621	0.29	0.01	0.001	0.002	0.005
257.00	262.00	5.00	5						
262.00	264.00	2.00	2	P384622	0.61	0.18	0.002	0.005	0.017
264.00	267.00	3.00	3						
267.00	269.00	2.00	2	P384623	0.1	0.01	0.002	0.003	0.009
269.00	272.00	3.00	3						
272.00	273.00	1.00	1	P384624	0.15	0.01	0.002	0.004	0.015
273.00	274.00	1.00	1						
274.00	275.00	1.00	1	P384625	0.09	0.01	0.001	0.003	0.007
275.00	276.00	1.00	1						
276.00	278.00	2.00	2	P384626	0.1	0.01	0.002	0.003	0.009
278.00	280.00	2.00	2						
280.00	282.00	2.00	2	P384627	0.11	0.01	0.002	0.003	0.008
282.00	284.00	2.00	2	P384628	0.12	0.01	0.002	0.003	0.005
284.00	287.00	3.00	3						
287.00	289.00	2.00	2	P384629	0.11	0.01	0.001	0.002	0.009
289.00	291.00	2.00	2	P384630	0.09	0.01	0.002	0.002	0.009
291.00	294.60	3.60	2.6						
294.60	296.00	1.40	1.4						
296.00	303.60	7.60	7.6						
303.60	307.80	4.20	4.2						
307.80	313.60	5.80	5.8						
313.60	314.83	1.23	1.23	P384631	0.19	0.01	0.001	0.003	0.015
314.83	315.95	1.12	1.12	P384632	0.15	0.01	0.001	0.003	0.010
315.95	317.15	1.20	1.2	P384633	0.17	0.01	0.001	0.004	0.014
317.15	318.20	1.05	1.05	P384634	0.13	0.01	0.001	0.004	0.013
318.20	320.00	1.80	1.8	P384635	0.16	0.01	0.001	0.003	0.004
320.00	322.00	2.00	2	P384636	0.22	0.01	0.001	0.003	0.012
322.00	324.00	2.00	2	P384637	0.39	0.01	0.001	0.004	0.011
324.00	326.00	2.00	2	P384638	0.15	0.01	0.001	0.003	0.005
326.00	328.00	2.00	2	P384639	0.23	0.01	0.001	0.003	0.012
328.00	334.50	6.50	6.5						
334.50	336.60	2.10	2.1						
336.60	338.60	2.00	2						
338.60	344.00	5.40	5.4						
344.00	346.00	2.00	2	P384640	0.29	0.01	0.002	0.002	0.011



346.00	348.00	2.00	2	P384641	0.24	0.01	0.002	0.002	0.012
348.00	350.00	2.00	2	P384642	0.2	0.01	0.002	0.002	0.010
350.00	356.00	6.00	6						
356.00	356.60	0.60	0.6	P384643	0.23	0.01	0.001	0.004	0.010
356.60	360.00	3.40	3.4	P384644	8.63	0.01	0.105	0.416	0.943
360.00	369.60	9.60	9.6						
369.60	372.70	3.10	3.1						
372.70	384.60	11.90	11.9						
384.60	387.80	3.20	3.2						
387.80	388.80	1.00	1						
388.80	391.70	2.90	484.9						
391.70	393.60	1.90	1.9						
393.60	398.47	4.87	4.87						
398.47	405.00	6.53	6.53						
405.00	408.80	3.80	3.8						
408.80	417.90	9.10	9.1						
417.90	3.60	-414.30	-414.3						
3.60	3.60	0.00	0						
469.85	485.30	15.45	15.45						
485.30	487.30	2.00	2						
487.30	490.90	3.60	3.6						
490.90	496.60	5.70	5.7						
496.60	500.00	3.40	3.4						
500.00	518.00	18.00	18						
518.00	519.60	1.60	1.6						
519.60	523.50	3.90	3.9						
523.50	529.40	5.90	5.9						
529.40	532.50	3.10	3.1						
532.50	536.70	4.20	4.2						
536.70	550.60	13.90	13.9						

## Appendix 2: JORC Table 1 – CRRDD21\_11A Exploration Results

### 1.1 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>• Lithological logging, photography</li> <li>• 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. Results of core loss are discussed below.</li> </ul>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> <li>• Experienced driller contracted to carry out drilling.</li> <li>• In broken ground the driller produced NQ core from short runs to maximise core recovery.</li> <li>• Core was washed before placing in the core trays.</li> <li>• Core was visually assessed by professional geologists before cutting to ensure representative sampling.</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>• See “Aspects of the determination of mineralisation that are Material to the Public Report” above.</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>• Core samples were not geotechnically logged.</li> <li>• Core samples have been geologically logged to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</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>• The core logging was qualitative in nature.</li> <li>• All core was photographed</li> </ul>
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> <li>• 100%</li> <li>• Total length of the hole was 550.6 metres of a planned 500m hole</li> <li>• 100% of the relevant intersections were logged.</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>• Oriented core was placed V-rail and a consistent cut-line drawn along core to ensure cutting (halving) of representative samples</li> <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>• Core sample intervals were based in logged mineralisation</li> <li>• No duplicates or second half-sampling</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. Sample will be 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> </ul>
	<i>The use of twinned holes.</i>	<ul style="list-style-type: none"> <li>• <i>This hole is not a twin of any previous hole</i></li> </ul>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<ul style="list-style-type: none"> <li>• <i>Core measured, photographed and logged by geologists. Digitally recorded plus back-up records.</i></li> </ul>
	<i>Discuss any adjustment to assay data.</i>	<ul style="list-style-type: none"> <li>• <i>No assay data received at this stage</i></li> </ul>
<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> </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>	<ul style="list-style-type: none"> <li>• <i>Not relevant to current drilling.</i></li> </ul>
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	<ul style="list-style-type: none"> <li>• <i>Not relevant to current drilling.</i></li> <li>• <i>No sample compositing has been applied.</i></li> </ul>

Criteria	JORC-Code Explanation	Commentary
	<i>Whether sample compositing has been applied.</i>	
<b>Orientation of data in relation to geological structure</b>	<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>	<ul style="list-style-type: none"> <li>• The orientation of the mineralisation is unknown. The drilling program is aimed at determining orientation of the mineralisation.</li> <li>• It is uncertain whether sampling bias has been introduced, or whether the thickness drilled is a true thickness.</li> </ul>
	<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>	
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <li>• Core samples will be stored the Gibsons core yard core yard before express overnight freight to Australian Laboratory Services Pty. Ltd. (ALS) Brisbane. Sample movements and security documented by ALS Chain of Custody.</li> </ul>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>• Not undertaken at this stage</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> <li>• Tenure is current and in good standing</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>	
<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>

Criteria	JORC-Code Explanation	Commentary																				
Geology	Deposit type, geological setting and style of mineralisation.	<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>																				
Drill hole Information	<p>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:</p> <table><tr><td>easting and northing of the drill hole collar</td></tr><tr><td>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</td></tr><tr><td>dip and azimuth of the hole</td></tr><tr><td>down hole length and interception depth</td></tr><tr><td>hole length.</td></tr><tr><td>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.</td></tr></table>	easting and northing of the drill hole collar	elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	dip and azimuth of the hole	down hole length and interception depth	hole length.	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	<table><tr><td>Hole ID</td><td>Easting</td><td>Northing</td><td>RL</td><td>Azimuth</td><td>Dip</td><td>To Depth</td></tr><tr><td>CRR21DD_11A</td><td>407509.61</td><td>6598093.59</td><td>737.76</td><td>320</td><td>75</td><td>550.6</td></tr></table> <ul style="list-style-type: none"><li>Not relevant</li></ul>	Hole ID	Easting	Northing	RL	Azimuth	Dip	To Depth	CRR21DD_11A	407509.61	6598093.59	737.76	320	75	550.6
easting and northing of the drill hole collar																						
elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar																						
dip and azimuth of the hole																						
down hole length and interception depth																						
hole length.																						
If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.																						
Hole ID	Easting	Northing	RL	Azimuth	Dip	To Depth																
CRR21DD_11A	407509.61	6598093.59	737.76	320	75	550.6																
Data aggregation methods	<p>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.</p> <p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<ul style="list-style-type: none"><li>Uncut</li><li>All aggregate intercepts detailed on tables are weighted averages.</li><li>None used</li></ul>																				



Criteria	JORC-Code Explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>• True width not currently known. All lengths are down-hole lengths and not true width.</li> </ul>
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>• Down-hole length reported, true width not known.</li> </ul>
<b>Diagrams</b>	<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>	<ul style="list-style-type: none"> <li>• The drilling is aimed at clarifying the structure of the mineralisation.</li> </ul>
<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 of 17 holes for a total of 3,700m to both verify historical drilling at Halls Peak but also to test deeper VTEM targets.</li> </ul>