BLACK CANYON

ASX Announcement

12 Sept 2023 ASX:BCA

Further Drill Results Confirm Significant Manganese Discovery at KR1

HIGHLIGHTS

- **Further assay results have been received from the ~7,000m reverse circulation (RC) drilling program completed across six key targets including KR1 within the Balfour Manganese Field.**
- **Results demonstrate thick manganese enriched shale mineralisation and continue to show scale at KR1, with the following significant intersections:**
  - **KRRC024 3m @ 19.2% Mn from surface**
  - **KRRC025 15m @ 18.6% Mn from 2m, including: 7m @ 26% Mn from 10m**
  - **KRRC027 23m @ 12.2% Mn from 11m, including: 4m @ 18.4% Mn from 12m**
  - **KRRC031 10m @ 15.2% Mn from 15m, including: 4m @ 18% Mn from 15m**
  - **KRRC045 20m @ 11.4% Mn from 9m**
  - **KRRC046 22m @ 12.2% Mn from 1m, including: 3m @ 18% Mn from 1m**
- **Drill assays confirm the KR1 manganese discovery has a cross strike width of between 200 to 500m and a strike extent of at least 600m and open to the north for a further 1,600m pending assay results.**
- **Overall geology, grade, and thickness are similar to Flanagan Bore mineralisation where 171Mt @ 10.3% Mn of Mineral Resource has been discovered at the FB3 and LR1 deposits.[1]**
- **Further assay results are expected from the other Balfour Manganese Targets over the next two months. The data will then be collated and Mineral Resource and/or Exploration Targets estimated subject to review of the results.**
- **Leaching testwork extracted 97% Mn from KR1 material[2], which is part of the expanded High Purity Manganese Sulphate (HPMSM) variability study. Purification stages have now commenced on the leached KR1 sample.**
- **The results from KR1 demonstrate that subject to further metallurgical testwork, it could provide suitable feedstocks for manganese oxide concentrate used as alloys in the steel industry as well as downstream production of HPMSM.**

[1] BCA Announcement 24 November 2022 – Flanagan Bore Mineral Resource Estimate Increased by 64%
[2] BCA Announcement 5 September 2023 – Advancing Battery Grade HPMSM Development

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Australian manganese explorer and developer, Black Canyon Limited (**Black Canyon** or the **Company**) (ASX: BCA) is pleased to announce further assay results yielding thick, shallow manganese enriched shales at the KR1 discovery within the Balfour Mineral Field (BMF), located in the Pilbara region of Western Australia.

The program, completed in July 2023, was designed to drill test six targets across Black Canyon's 100% owned tenements within the Balfour Manganese Field (Figure 1). These latest assay results continue to demonstrate widespread manganese mineralisation at KR1 with several higher-grade intersections reported from surface or near to surface. All the drill samples are at the laboratory and further assays from the remaining targets are expected over the coming months.

Black Canyon Executive Director, Brendan Cummins, said:

"The continued delivery of wide zones of manganese enriched shale at KR1 has tripled the known strike of the mineralised body to 600m with a further 1,600m of drill results along strike to the northeast still to be received, which could see a material increase in the mineralised footprint. Cross-strike widths are also significant, ranging from 200 to 500m and the latest results have also shown shallow higher-grade intervals ranging between 18% and 26% Mn. In short, we are extremely pleased with the way the KR1 discovery is currently trending.

"The results are confirming our expectations of the mineralisation model and we are confident that KR1 and other key targets across the Balfour Manganese Field will help to build Mineral Resources, based on previous discoveries we have made in the region."

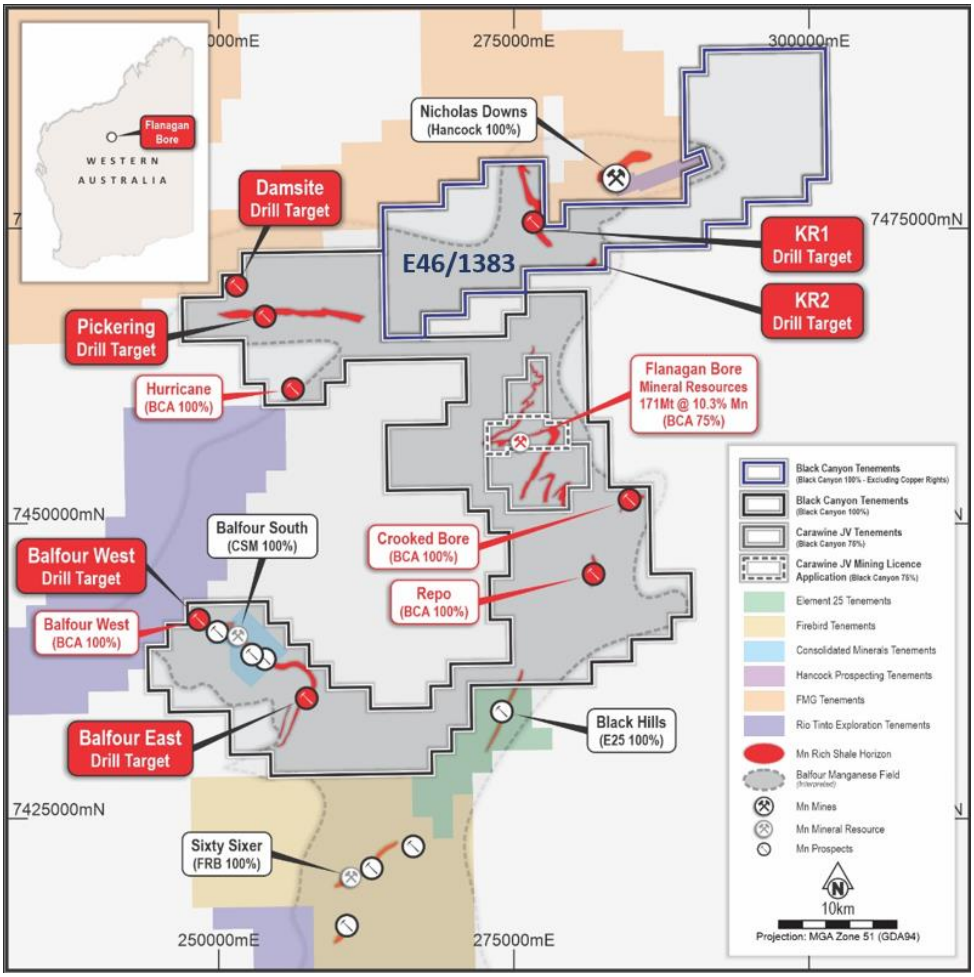

Figure 1. Location of the main drill targets across the Balfour Manganese Field and manganese shale target horizon (red solid outlines).

KR1 Discovery RC Drill Assay Results

A total of 220 holes for 6,927m of drilling were drilled across six target areas. The program was designed to drill test multiple targets across Black Canyon's 100% owned tenements within the Balfour Manganese Field. The drill intersections announced in this release represent further assays received from drilling at KR1, with approximately half of the KR1 drillhole results now reported.

At KR1, the Company tested a previously undrilled 2,500m section of outcropping supergene mineralisation using E-W oriented lines, 200m apart with drillholes spaced at 100m or 200m centres.

Widespread manganese mineralisation was encountered with stronger zones of surface manganese enrichment intersected along a 1,500m long ridge. The mineralised zones are between 200 and 500m wide, extending 10m to 25m downhole. The drill data and mapping completed at KR1 have confirmed the mineralised horizon is shallowly dipping to the west and striking to the north-northeast.

Satellite imagery and check mapping has confirmed additional untested manganese enrichment for a further 3,000m to the north combining to an overall strike length of 5,000m. The mineralisation to the south appears to be closed off or possibly displaced by a structure and infilled with dolerite, however this requires additional drilling to resolve.

Significant results are presented in plan(s) and section in Figures 2, 3 & 4 respectively and are listed below:

- **KRRC024** **3m @ 19.2% Mn from surface**
- **KRRC025** **15m @ 18.6% Mn from 2m including 7m @ 26% Mn from 10m**
- **KRRC027** **23m @ 12.2% Mn from 11m including 4m @ 18.4% Mn from 12m**
- **KRRC031** **10m @ 15.2% Mn from 15m including 4m @ 18% Mn from 15m**
- **KRRC045** **20m @ 11.4% Mn from 9m**
- **KRRC046** **22m @ 12.2% Mn from 1m including 3m @ 18% Mn from 1m**

Further assays are pending and expected to be received over the next 2 months prior to the estimation of Mineral Resources and/or Exploration Targets, subject to analysis of the results confirming grade and geological continuity at each of the prospects drilled. Results from the drilling program are presented in Appendix 1.

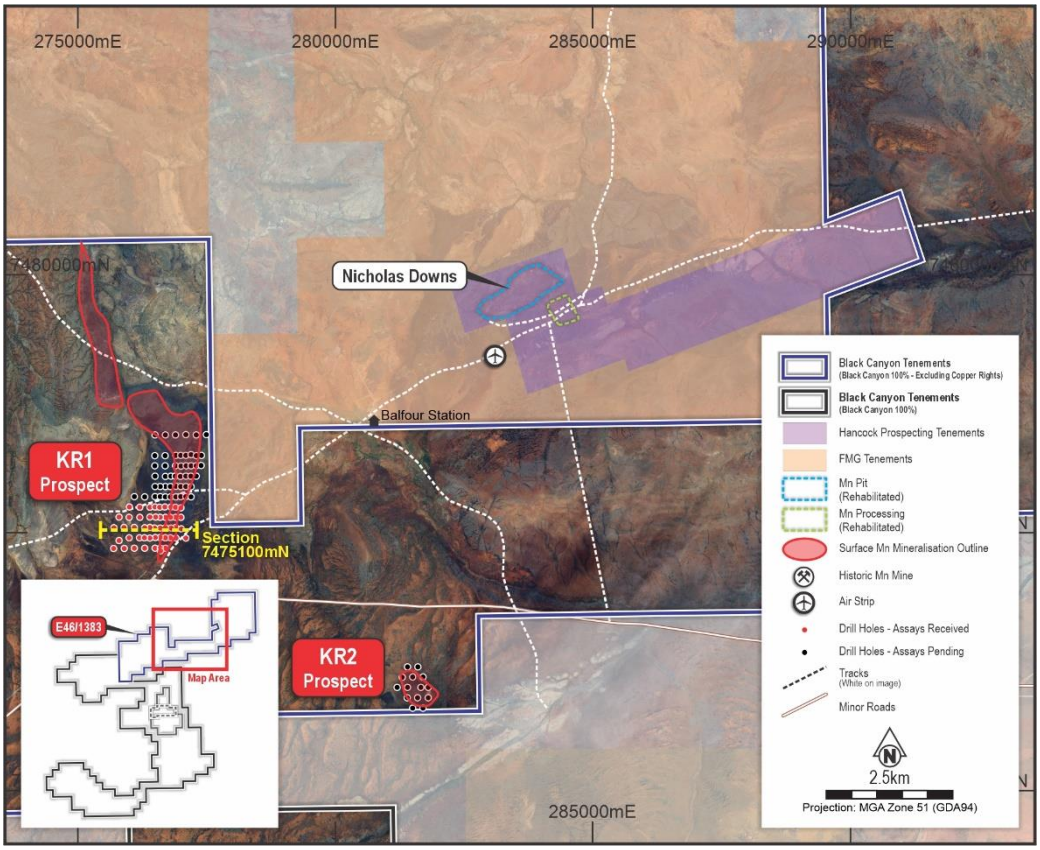

Figure 2. Location map of the KR1, KR2 and the historic Nicholas Downs Manganese Mine.

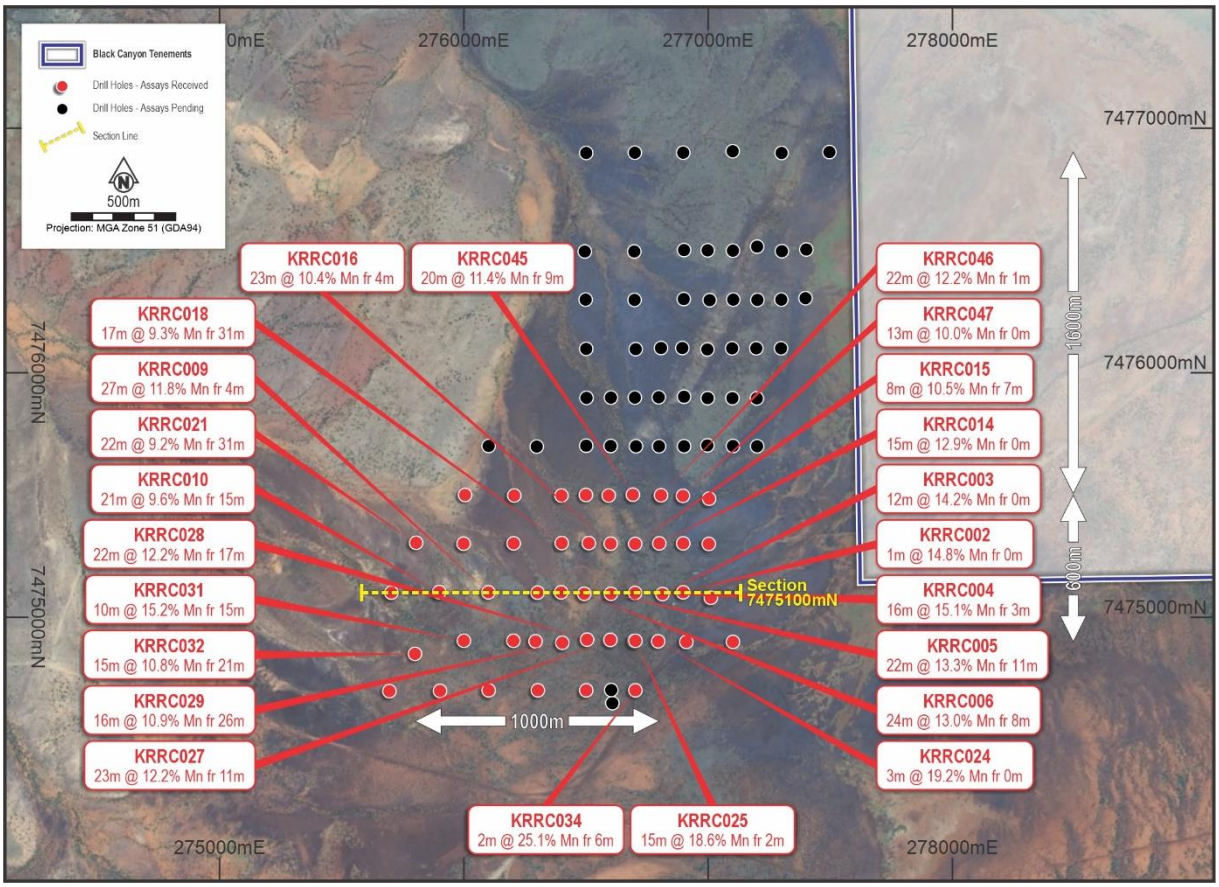

Figure 3. Drill plan, cross-section location and significant results received from KR1.

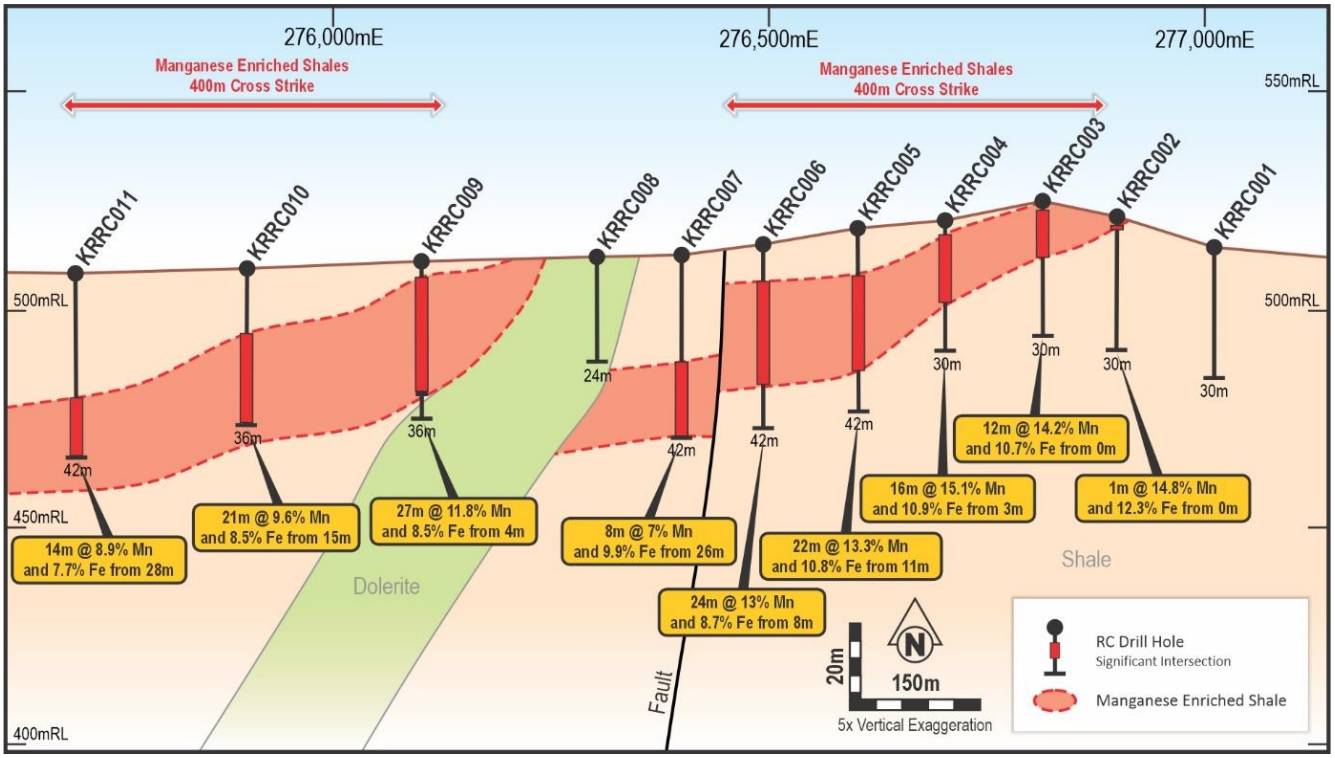

Figure 4. KR1 cross-section 7,475,100mN (looking to the north) with manganese enriched shale and drill intersections.

Manganese Oxide HPMSM Feedstock Variability Studies (BCA 100%)

Black Canyon has continued to advance its feedstock variability studies[3] to ascertain the amenability of various manganese ore sources to simple beneficiation, leaching and ultimately producing HPMSM. As part of the variability study, material from the KR1 prospect has been leached and yielded a 97% extraction rate. With the completion of the successful leaching process, the KR1 sample is now undergoing purification stages prior to crystallisation of HPMSM.

The Company is seeking to develop a low CAPEX, low impact mining facility that could be permitted and approved relatively quickly. Some of the drill targets, such as KR1, as part of the July RC program are of a scale that may help facilitate this strategy. This would potentially reduce the timeframes for Black Canyon to supply manganese oxide feedstock to a downstream HPMSM facility. Black Canyon has commissioned experienced environmental and approval specialist, Preston Consultants, to advise on the likely environmental studies, approvals and timeframes required for a campaigned based mining operation utilising simple beneficiation processes to upgrade the manganese oxide materials in preparation for hydrometallurgical processing into HPMSM.

The expanded HPMSM strategy is in addition to the ongoing Flanagan Bore activities where the Company has established a Mineral Resource of 171 Mt @ 10.3% Mn.[4] Flanagan Bore is part of the Carawine JV where Black Canyon has earnt a 75% interest.

[3] BCA Announcement 1 June 2023 – Expanded HPMSM testwork yields positive results.
[4] BCA Announcement 24 November 2022 – Flanagan Bore Mineral Resource Estimate Increased by 64%

This announcement has been approved by the Board of Black Canyon Limited.

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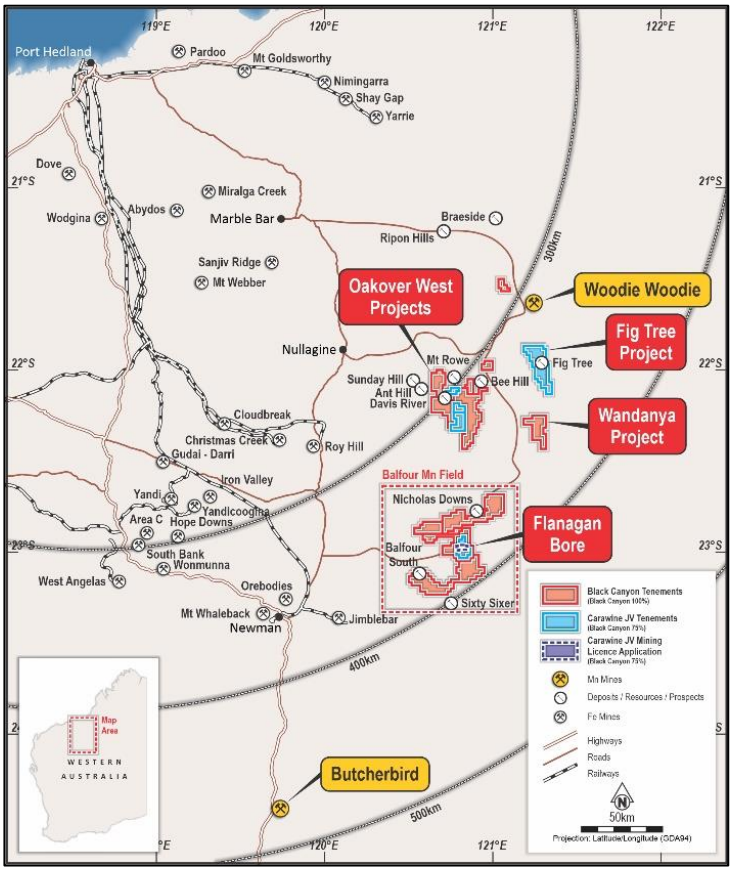
About Black Canyon



Black Canyon has consolidated a significant land holding totalling 2,400km^2 in the underexplored Balfour Manganese Field and across the Oakover Basin, in Western Australia.

The emerging potential for the Balfour Manganese Field is evident by the size of the geological basin, mineral resources identified to date, distance from port, potential for shallow open pit mining and a likely beneficiated Mn oxide concentrate product grading between 30 and 33% Mn. Black Canyon holds several exploration licenses 100% within the Balfour Manganese Field along with a 75% interest in the Carawine Joint Venture with ASX listed Carawine Resources Limited. A Mineral Resource (Measured and Indicated) of **171Mt @ 10.3% Mn** has been defined at Flanagan Bore which is part of the Carawine JV[4].

Manganese continues to have attractive fundamentals where it is essential and non-substitutable in the manufacturing of alloys for the steel industry and a critical mineral in the cathodes of Li-ion batteries.

Compliance Statements

Reporting of Exploration Results and Previously Reported Information

The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation reviewed by Mr Brendan Cummins, Executive Director of Black Canyon Limited. Mr Cummins is a member of the Australian Institute of Geoscientists, and he has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which has been 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 Cummins consents to the inclusion in this release of the matters based on the information in the form and context in which they appear. Mr Cummins is a shareholder of Black Canyon Limited.

For further information, please refer to ASX announcements dated 17 May 2021, 10 June 2021, 7 July 2021, 5 October 2021, 4 January 2022, 8 February 2022, 21 February 2022, 2 March 2022, 23 March 2022,13 April 2022, 9 June 2022, 7 September 2022, 15 September 2022, 11 October, 21 & 24 November 2022, 5 December 2022, 28 December 2022, 14 February 2023, 27 March 2023, June 1 2023, June 14 2023, June 17 2023, July 14 2023, 23 August 2023 and 5 September 2023 which are available from the ASX Announcement web page on the Company's website. The Company confirms that there is no new information or data that materially affects the information presented in this release that relate to Exploration Results and Mineral Resources in the original market announcements.

Note 4 ASX release 24/11/2022 Mineral Resource increases by 64% at Flanagan Bore.

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Appendix 1. Balfour Manganese July 2023 drill collar information and assay results to date

NSR – No Significant Intersect

HOLE ID	PROSPECT	E_GDA94	N_GDA94	RL	EOH	DIP	AZIMUTH	FROM (m)	TO (m)	THICKNESS (m)	Mn (%)	Fe (%)	DRILL INTERSECTIONS
KRRC001	KR1	277011	7475082	514.5	30	-90	360						NSR
KRRC002	KR1	276899	7475104	521	30	-90	360	0	1	1	14.8	12.3	1m @ 14.8% Mn & 12.3% Fe from 0m
KRRC003	KR1	276814	7475097	524.5	30	-90	360	0	12	12	14.2	10.7	12m @ 14.2% Mn & 10.7% Fe from 0m
KRRC004	KR1	276702	7475101	520.5	30	-90	360	3	19	16	15.1	10.9	**16m @ 15.1% Mn & 10.9% Fe from 3m**
KRRC005	KR1	276603	7475098	518.8	42	-90	360	11	33	22	13.3	10.8	**22m @ 13.3% Mn & 10.8% Fe from 11m**
KRRC006	KR1	276493	7475098	514.8	42	-90	360	8	32	24	13	8.7	**24m @ 13% Mn & 8.7% Fe from 8m**
KRRC007	KR1	276399	7475104	512.7	42	-90	360	26	34	8	7	9.9	8m @ 7% Mn & 9.9% Fe from 26m
KRRC008	KR1	276302	7475103	512.2	24	-90	360						NSR
KRRC009	KR1	276101	7475104	511.2	36	-90	360	4	31	27	11.8	8.5	**27m @ 11.8% Mn & 8.5% Fe from 4m**
KRRC010	KR1	275900	7475105	509.5	36	-90	360	15	36	21	9.6	8.3	**21m @ 9.6% Mn & 8.3% Fe from 15m until EOH**
KRRC011	KR1	275704	7475103	508	42	-90	360	28	42	14	8.9	7.7	14m @ 8.9% Mn & 7.7% Fe from 28m
KRRC012	KR1	277003	7475301	513.6	24	-90	360			0			NSR
KRRC013	KR1	276899	7475304	516.5	24	-90	360	0	6	6	9.6	7	6m @ 9.6% Mn & 7% Fe from 0m
KRRC014	KR1	276801	7475304	522	24	-90	360	0	15	15	12.9	8.7	**15m @ 12.9% Mn & 8.7% Fe from 0m**
KRRC015	KR1	276702	7475302	516	24	-90	360	7	15	8	10.5	15.2	8m @ 10.5% Mn & 15.2% Fe from 7m
KRRC016	KR1	276602	7475303	513.8	36	-90	360	4	27	23	10.4	8.9	**23m @ 10.4% Mn & 8.9% Fe from 4m**
KRRC017	KR1	276512	7475305	512.2	30	-90	360			0			NSR
KRRC018	KR1	276401	7475305	510.8	54	-90	360	31	48	17	9.3	7.7	17m @ 9.3% Mn & 7.7% Fe from 31m
KRRC019	KR1	276204	7475304	509	30	-90	360			0			NSR
KRRC020	KR1	276000	7475303	507.3	24	-90	360	8	12	4	9.8	9.5	4m @ 9.8% Mn & 9.5% Fe from 8m
KRRC021	KR1	275805	7475306	505.8	54	-90	360	31	53	22	9.2	7.7	**22m @ 9.2% Mn & 7.7% Fe from 31m**
KRRC022	KR1	277102	7474901	512.1	30	-90	360			0			NSR
KRRC023	KR1	276911	7474901	516	30	-90	360			0			NSR
KRRC024	KR1	276796	7474903	519.4	24	-90	360	0	3	3	19.2	11.5	**3m @ 19.2% Mn & 11.5% Fe from 0m**
KRRC025*	KR1	276697	7474904	520	17	-90	360	2	17	15	18.6	14.1	**15m @ 18.6% Mn & 14.1% Fe from 2m including 7m @ 26% Mn from 10m**
KRRC026*	KR1	276703	7474906	521	30	-90	360	4	18	14	18.3	14.3	**14m @ 18.3% Mn & 14.3% Fe from 4m**
KRRC027	KR1	276600	7474909	521.5	42	-90	360	11	34	23	12.2	8.7	**23m @ 12.2% Mn & 8.7% Fe from 11m including 4m @ 18.4% Mn from 12m**
KRRC028	KR1	276505	7474910	520	48	-90	360	17	39	22	12.2	8.8	**22m @ 12.2% Mn & 8.8% Fe from 17m**
KRRC029	KR1	276404	7474898	518.3	54	-90	360	26	42	16	10.9	9.7	**16m @ 10.9% Mn & 9.7% Fe from 26m**
KRRC030	KR1	276203	7474906	515.5	24	-90	360			0			NSR
KRRC031	KR1	276001	7474906	513	30	-90	360	15	25	10	15.2	11.6	**10m @ 15.2% Mn & 11.6% Fe from 15m including 4m @ 18% Mn from 15m**
KRRC032	KR1	275801	7474852	509.9	36	-90	360	21	36	15	10.8	9.2	**15m @ 10.8% Mn & 9.2% Fe from 21m**
KRRC033	KR1	276294	7474903	516	30	-90	360			0			NSR
KRRC034	KR1	276703	7474703	517.7	30	-90	360	6	8	2	25.1	8	2m @ 25.1% Mn & 8% Fe from 6m
KRRC035	KR1	276501	7474703	519.2	24	-90	360			0			NSR
KRRC036	KR1	276303	7474703	518.6	24	-90	360			0			NSR
KRRC037	KR1	276102	7474703	515.5	18	-90	360			0			NSR
KRRC038	KR1	275903	7474701	514.6	18	-90	360			0			NSR
KRRC039	KR1	275696	7474699	511.1	18	-90	360			0			NSR
KRRC040	KR1	276005	7475502	506.7	24	-90	360			0			NSR
KRRC041	KR1	276207	7475500	507.5	30	-90	360			0			NSR
KRRC042	KR1	276400	7475499	509	18	-90	360			0			NSR
KRRC043	KR1	276500	7475502	510.5	18	-90	360			0			NSR
KRRC044	KR1	276594	7475499	511.5	24	-90	360			0			NSR
KRRC045	KR1	276692	7475503	513	36	-90	360	9	29	20	11.4	9.1	**20m @ 11.4% Mn & 9.1% Fe from 9m**
KRRC046	KR1	276808	7475501	517	30	-90	360	1	23	22	12.2	9.4	**22m @ 12.2% Mn & 9.4% Fe from 1m including 3m @ 18% Mn from 1m**
KRRC047	KR1	276897	7475498	515.5	24	-90	360	0	13	13	10	7.4	**13m @ 10% Mn & 7.4% Fe from 0m**
KRRC048	KR1	277004	7475487	512	18	-90	360			0			NSR
BSRC001	BW	248602	7441203	463	54	-90	360			0			awaiting results
BSRC002	BW	248589	7441298	463	54	-90	360			0			awaiting results
BSRC003	BW	248602	7441405	463	84	-90	360			0			awaiting results
BSRC004	BW	248601	7441506	463	72	-90	360			0			awaiting results
BSRC005	BW	248600	7441600	463	66	-90	360			0			awaiting results
BSRC006	BW	248601	7441705	463	60	-90	360			0			awaiting results
BSRC007	BW	248601	7441100	463	54	-90	360			0			awaiting results
BSRC008	BW	248606	7441808	463	40	-90	360			0			awaiting results
BSRC009	BW	248605	7441903	463	42	-90	360			0			awaiting results
BSRC010	BW	248799	7441704	463	36	-90	360			0			awaiting results
BSRC011	BW	248801	7441806	463	42	-90	360			0			awaiting results
BSRC012	BW	248800	7441907	463	42	-90	360			0			awaiting results
BSRC013	BW	248799	7441999	463	48	-90	360			0			awaiting results
BSRC014	BW	248997	7441902	463	42	-90	360			0			awaiting results
BSRC015	BW	248999	7441799	463	42	-90	360			0			awaiting results
BSRC016	BW	248998	7441690	463	42	-90	360			0			awaiting results
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BSRC021	BW	248203	7441697	463	36	-90	360			0			awaiting results

BSRC022	BW	248203	7441804	463	36	-90	360			0			awaiting results
BSRC023	BW	248202	7441900	463	36	-90	360			0			awaiting results
BSRC024	BW	247800	7441410	463	40	-90	360			0			awaiting results
BSRC025	BW	247800	7441610	463	48	-90	360			0			awaiting results
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BSRC027	BW	247801	7442001	463	36	-90	360			0			awaiting results
BSRC028	BW	249200	7441704	463	36	-90	360			0			awaiting results
BSRC029	BW	249201	7441799	463	40	-90	360			0			awaiting results
BSRC030	BW	249398	7441804	463	36	-90	360			0			awaiting results
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BSRC037	BE	256770	7436074	485	30	-90	360			0			awaiting results
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BSRC039	BE	256421	7434925	485	54	-90	360			0			awaiting results
BSRC040	BE	256329	7434636	485	36	-90	360			0			awaiting results
BSRC041	BE	256220	7434220	485	30	-90	360			0			awaiting results
BSRC042	BE	256540	7435307	485	30	-90	360			0			awaiting results
BSRC043	BE	257385	7435402	485	60	-90	360			0			awaiting results
BSRC044	BE	257463	7435481	485	48	-90	360			0			awaiting results
BSRC045	BE	255604	7438306	485	24	-90	360			0			awaiting results
BSRC046	BE	255598	7438204	485	24	-90	360			0			awaiting results
BSRC047	BE	255601	7438103	485	24	-90	360			0			awaiting results
BSRC048	BE	255604	7437999	485	24	-90	360			0			awaiting results
BSRC049	BE	255602	7437901	485	24	-90	360			0			awaiting results
BSRC050	BE	255603	7437801	485	24	-90	360			0			awaiting results
BSRC051	BE	255600	7437705	485	24	-90	360			0			awaiting results
BSRC052	BE	255599	7437602	485	24	-90	360			0			awaiting results
BSRC053	BE	254798	7438102	485	30	-90	360			0			awaiting results
BSRC054	BE	254798	7438002	485	24	-90	360			0			awaiting results
BSRC055	BE	254797	7437903	485	30	-90	360			0			awaiting results
BSRC056	BE	254796	7437805	485	24	-90	360			0			awaiting results
BSRC057	BE	254798	7437706	485	24	-90	360			0			awaiting results
BSRC058	BE	254801	7437605	485	24	-90	360			0			awaiting results
BSRC059	BE	256999	7438206	485	36	-90	360			0			awaiting results
BSRC060	BE	256994	7438102	485	30	-90	360			0			awaiting results
BSRC061	BE	256996	7438004	485	24	-90	360			0			awaiting results
BSRC062	BE	256996	7437901	485	24	-90	360			0			awaiting results
BSRC063	BE	256996	7437799	485	24	-90	360			0			awaiting results
BSRC064	BE	256997	7437702	485	24	-90	360			0			awaiting results
BSRC065	BE	256999	7437607	485	24	-90	360			0			awaiting results
BSRC066	BE	256997	7437510	485	24	-90	360			0			awaiting results
KRRC049	KR1	276102	7475702	506.4	24	-90	360			0			awaiting results
KRRC050	KR1	276299	7475700	505	24	-90	360			0			awaiting results
KRRC051	KR1	276502	7475703	508.5	30	-90	360			0			awaiting results
KRRC052	KR1	276602	7475702	508	30	-90	360			0			awaiting results
KRRC053	KR1	276705	7475701	510	48	-90	360			0			awaiting results
KRRC054	KR1	276799	7475701	511	24	-90	360			0			awaiting results
KRRC055	KR1	276902	7475701	511.5	30	-90	360			0			awaiting results
KRRC056	KR1	276998	7475705	511	24	-90	360			0			awaiting results
KRRC057	KR1	277102	7475702	510	24	-90	360			0			awaiting results
KRRC058	KR1	277201	7475701	508	24	-90	360			0			awaiting results
KRRC059	KR1	276701	7475900	508	42	-90	360			0			awaiting results
KRRC060	KR1	276798	7475901	510	48	-90	360			0			awaiting results
KRRC061	KR1	276902	7475903	510	12	-90	360			0			awaiting results
KRRC062	KR1	276999	7475898	510	36	-90	360			0			awaiting results
KRRC063	KR1	277100	7475898	509	24	-90	360			0			awaiting results
KRRC064	KR1	277200	7475897	508	24	-90	360			0			awaiting results
KRRC065	KR1	276501	7476099	505	24	-90	360			0			awaiting results
KRRC066	KR1	276704	7476098	505	48	-90	360			0			awaiting results
KRRC067	KR1	276808	7476103	507	42	-90	360			0			awaiting results
KRRC068	KR1	276895	7476103	507.5	42	-90	360			0			awaiting results
KRRC069	KR1	276997	7476097	509	12	-90	360			0			awaiting results
KRRC070	KR1	277099	7476102	509	30	-90	360			0			awaiting results
KRRC071	KR1	277198	7476102	508	24	-90	360			0			awaiting results
KRRC072	KR1	277299	7476101	506	24	-90	360			0			awaiting results
KRRC073	KR1	276499	7476301	503	30	-90	360			0			awaiting results
KRRC074	KR1	276699	7476300	504	60	-90	360			0			awaiting results
KRRC075	KR1	276901	7476303	505	54	-90	360			0			awaiting results
KRRC076	KR1	277007	7476298	508	48	-90	360			0			awaiting results
KRRC077	KR1	277103	7476301	508	12	-90	360			0			awaiting results
KRRC078	KR1	277202	7476300	507	30	-90	360			0			awaiting results
KRRC079	KR1	277300	7476301	506	24	-90	360			0			awaiting results
KRRC080	KR1	277399	7476307	505	24	-90	360			0			awaiting results
KRRC081	KR1	276496	7476498	502	30	-90	360			0			awaiting results
KRRC082	KR1	276698	7476498	503	24	-90	360			0			awaiting results
KRRC083	KR1	276902	7476503	507	30	-90	360			0			awaiting results

KRRC084	KR1	276999	7476502	507	24	-90	360			0			awaiting results
KRRC085	KR1	277102	7476501	507	24	-90	360			0			awaiting results
KRRC086	KR1	277201	7476517	507	12	-90	360			0			awaiting results
KRRC087	KR1	277302	7476499	506	18	-90	360			0			awaiting results
KRRC088	KR1	277403	7476505	505	18	-90	360			0			awaiting results
KRRC089	KR1	276501	7476900	501	30	-90	360			0			awaiting results
KRRC090	KR1	276701	7476902	503	48	-90	360			0			awaiting results
KRRC091	KR1	276898	7476902	505	36	-90	360			0			awaiting results
KRRC092	KR1	277101	7476907	508	36	-90	360			0			awaiting results
KRRC093	KR1	277301	7476900	507	24	-90	360			0			awaiting results
KRRC094	KR1	277497	7476904	505	24	-90	360			0			awaiting results
KRRC095	KR1	276603	7475900	507	60	-90	360			0			awaiting results
KRRC096	KR1	276503	7475899	506	60	-90	360			0			awaiting results
KRRC097	KR1	276604	7474704	518	42	-90	360			0			awaiting results
KRRC098	KR1	276609	7474651	518	48	-90	360			0			awaiting results
KRRC099	KR2	281402	7472401	500	30	-90	360			0			awaiting results
KRRC100	KR2	281604	7472403	500	24	-90	360			0			awaiting results
KRRC101	KR2	281302	7472200	500	24	-90	360			0			awaiting results
KRRC102	KR2	281703	7472204	500	24	-90	360			0			awaiting results
KRRC103	KR2	281502	7472204	500	36	-90	360			0			awaiting results
KRRC104	KR2	281204	7472003	500	24	-90	360			0			awaiting results
KRRC105	KR2	281404	7472003	500	30	-90	360			0			awaiting results
KRRC106	KR2	281662	7472003	500	30	-90	360			0			awaiting results
KRRC107	KR2	281803	7472005	500	24	-90	360			0			awaiting results
KRRC108	KR2	281400	7471806	500	30	-90	360			0			awaiting results
KRRC109	KR2	281601	7471802	500	24	-90	360			0			awaiting results
KRRC110	KR2	281804	7471803	500	24	-90	360			0			awaiting results
KRRC111	KR2	281502	7471601	500	30	-90	360			0			awaiting results
KRRC112	KR2	281707	7471603	500	24	-90	360			0			awaiting results
PKRC001	PK	252404	7470998	480	24	-90	360			0			awaiting results
PKRC002	PK	252397	7471101	480	24	-90	360			0			awaiting results
PKRC003	PK	252403	7471200	480	24	-90	360			0			awaiting results
PKRC004	PK	252401	7471301	480	24	-90	360			0			awaiting results
PKRC005	PK	252402	7471403	480	24	-90	360			0			awaiting results
PKRC006	PK	252403	7471500	480	24	-90	360			0			awaiting results
PKRC007	PK	252202	7471507	480	24	-90	360			0			awaiting results
PKRC008	PK	252203	7471404	480	24	-90	360			0			awaiting results
PKRC009	PK	252199	7471303	480	24	-90	360			0			awaiting results
PKRC010	PK	252198	7471205	480	24	-90	360			0			awaiting results
PKRC011	PK	252198	7471107	480	24	-90	360			0			awaiting results
PKRC012	PK	252201	7471004	480	24	-90	360			0			awaiting results
PKRC013	PK	252020	7471506	480	24	-90	360			0			awaiting results
PKRC014	PK	252021	7471406	480	24	-90	360			0			awaiting results
PKRC015	PK	252021	7471304	480	24	-90	360			0			awaiting results
PKRC016	PK	252021	7471204	480	24	-90	360			0			awaiting results
PKRC017	PK	252020	7471107	480	24	-90	360			0			awaiting results
PKRC018	PK	252020	7470997	480	24	-90	360			0			awaiting results
PKRC019	PK	256395	7467803	480	24	-90	360			0			awaiting results
PKRC020	PK	256403	7467705	480	24	-90	360			0			awaiting results
PKRC021	PK	256401	7467605	480	24	-90	360			0			awaiting results
PKRC022	PK	256000	7468201	480	24	-90	360			0			awaiting results
PKRC023	PK	255999	7468104	480	24	-90	360			0			awaiting results
PKRC024	PK	256000	7468004	480	54	-90	360			0			awaiting results
PKRC025	PK	256002	7467902	480	24	-90	360			0			awaiting results
PKRC026	PK	256001	7467808	480	24	-90	360			0			awaiting results
PKRC027	PK	255999	7467705	480	24	-90	360			0			awaiting results
PKRC028	PK	256001	7467601	480	24	-90	360			0			awaiting results
PKRC029	PK	255196	7468205	480	24	-90	360			0			awaiting results
PKRC030	PK	255197	7468102	480	24	-90	360			0			awaiting results
PKRC031	PK	255200	7468006	480	24	-90	360			0			awaiting results
PKRC032	PK	255201	7467904	480	24	-90	360			0			awaiting results
PKRC033	PK	255202	7467804	480	24	-90	360			0			awaiting results
PKRC034	PK	255198	7467699	480	24	-90	360			0			awaiting results
PKRC035	PK	255201	7467601	480	24	-90	360			0			awaiting results
PKRC036	PK	254398	7468202	480	24	-90	360			0			awaiting results
PKRC037	PK	254398	7468103	480	24	-90	360			0			awaiting results
PKRC038	PK	254402	7467998	480	24	-90	360			0			awaiting results
PKRC039	PK	254403	7467906	480	24	-90	360			0			awaiting results
PKRC040	PK	254406	7467802	480	24	-90	360			0			awaiting results
PKRC041	PK	254400	7467703	480	24	-90	360			0			awaiting results
PKRC042	PK	254396	7467605	480	24	-90	360			0			awaiting results

* holes KRRC025 and KRRC026 are twin holes

Appendix 2. JORC 2012 Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The samples were collected using industry standard Reverse Circulation (RC) drill methods. • Drilling was completed by Impact Drilling who completed the entire RC drill program – 220 holes for 6927m. • There was limited water encountered during the drill program. • The drilling and sample techniques are considered representative for the style of mineralisation utilising 1m sample intervals gathered directly from the RC drill rig using an adjustable cone splitter from a levelled drill rig. • The target sample weight was between 2-3kg which is appropriate for the style of mineralisation.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The drill type is Reverse Circulation (RC) drilling vertical holes. • The drill diameter us 5 ¼ inch RC using a face sampling hammer
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Sample recovery was estimated by the geologist on the rig and secondly by assessing the weight of the representative samples delivered to laboratory. • The drill recoveries were deemed acceptable with supervision of the sampling at the cone splitter. • No sample bias due to sample loss is evident from the observed sample recoveries. • The samples were drilled mostly dry again minimising sample bias
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Drillhole logging was completed at the drill rig recording lithology, texture, grain size and colour. • 1m chip trays were also collected in site, photographed and used to further detailed logging post the drill program. • The logging was considered appropriate for exploration reporting and eventually Mineral Resource Estimation • Every 1m interval as logged and sieved for inspection – 6927 intervals were inspected
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The 1m RC samples were gathered by using a levelled cone splitter of the side of the rig. • The samples were dominantly dry. • Black Canyon inserted Certified Reference Material (CRM) at a rate of 1/50, blanks at a rate of 1/50 and field duplicates from the cone splitter at a rate of 1/50 for a total insertion rate of QA/QC materials at 6% • The sub sampling technique and quality control procedures is considered appropriate to ensure sample representivity • The sample size is considered appropriate for the grainsize and style of mineralisation
Quality of assay data	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and*	• The samples were submitted to Bureau Veritas in Canningvale, WA.

Criteria	JORC Code explanation	Commentary
and laboratory tests	*whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The 2 – 3kg samples were weighed and dried prior to pulverising 100% of the sample 95% passing 105µm. • The sample was then analysed using method XF103 for manganese ores using fusion disc XRF for Fe, SiO2, Mn, Al2O3, TiO2, P2O5, S, MgO, K2O, Na2O, CaO, BaO and Cr2O3. • Loss on Ignition (LOI) was also measured by Thermo Gravimetric Analysis (TGA) • Review of the quality control results received to date that include CRM, blanks, duplicates show an acceptable level of accuracy (lack of bias) and precision has been achieved. • In addition, Bureau Veritas has undertaken its own internal QAQC checks using CRM, Blanks and pulp duplicates and no issues have been reported or identified. • The CP is satisfied that the analysis was completed to an acceptable standard in the context in which the results have been reported
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The significant intersections have not been verified by independent personnel. • Once the assays are received the new drill assay data will be compared to the previous drill hole assays by the Independent Resource Geologist
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Once a drill hole was completed the drill collar was located using a GARMIN handheld GPS with an accuracy of +/- 5m • The grid system is UTM zone 51, GDA94 datum. • The topography is quite flat reflecting the underlying stratigraphy. The holes are shallow and downhole deviation is not considered material in the context of these results
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Drill line and hole spacing has been described for each prospect in the main body of the text. • No sample compositing has been applied
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The deposits are interpreted to be is flat and gently plunging. Drill logs and assay data have identified cross cutting dolerite dykes that may have intruded into zones of structural weakness. Further drilling and interpretation are required to ascertain the impact of dolerite intrusions on the mineralisation. • The drill hole orientation otherwise is suitable for this style of mineralisation and considered appropriate and unlikely to introduce sample bias
Sample security	• *The measures taken to ensure sample security.*	• The samples were collected into bulka bags, sealed with cable ties and stored on site until the drill program was completed. • The samples were then trucked to Perth in three consignments and delivered directly to Bureau Veritas in Canningvale. • The bulka bags were inspected and audited by Bureau Veritas who did not report any suspicious or tampered samples
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Other than internal review by Company staff, no audits have been completed. • The CP was on site for some of the RC drill program and considers the sampling and sub sampling techniques to be equal to industry standard and appropriate for the style of mineralisation and the results being reported.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and	• *Type, reference name/number, location and ownership including agreements or material*	• The drilling was undertaken on granted tenements E46/1383, E46/1404 and E46/1396

Criteria	JORC Code explanation	Commentary
land tenure status	*issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The tenements and all mineral rights are 100% owned by Black Canyon Ltd apart from E46/1383 where Killi Resources owns the copper rights. • The tenements have Native Title Heritage Protection Agreements in place with the Karlka Nyiyaparli People that required a Heritage Survey to be undertaken prior to ground disturbing activities. Both Ethnographic and Archeologic surveys have been completed prior to commencement of site activities. • There are no other known impediments to exploring the listed tenements
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• There has been limited exploration work carried out on the tenements for manganese. • There has been no drilling carried out by past explorers specifically targeting manganese on these tenements
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The tenements are located within the Oakover Basin, the edges of which are defined by the Neoarchaean Fortescue Group. Most of the tenements are covered by quaternary alluvium, sheetwash with restricted outcrop that comprises rocks of the Manganese Group, mainly the Encheddong Dolomite and Balfour Formation. The tenements contain widespread manganese scree associated with manganese enriched Balfour Formation shales. • The mineralisation is described as supergene manganese enriched shale. The host Mn shale is gradually enriched in manganese as it weathers or is leached and redeposited in the upper zones. The upgrades can be substantial and are often associated with iron. Structural enhancement maybe a factor in developing thick zones of mineralisation. Both Mn and Fe are very mobile in the near surface environment in WA.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• Refer to Appendix 1 for a complete listing of the RC drill holes completed across the Balfour Manganese Field for the July 2023 RC drill program by Black Canyon

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Only length (1m) weighted intervals are included in the text of this release. • Manganese intervals have been reported at 7% Mn cut off allowing dilution that still enables the total reported grade to be greater than 7% Mn. • Iron intervals have been reported as they coincide with the Mn intervals and no cut offs are applied. • No metal equivalent values are used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• The deposit is mostly flat lying exhibiting a gentle dip of mineralisation to the west therefore 90° angled (vertical) drill holes are considered appropriate. • The drill results reported are interpreted to represent close to true widths of the mineralisation and are reported at down hole length.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These*	• These have been included in the body of the release where relevant and material to the reader's understanding of the results in regard to the context in which they have been

Criteria	JORC Code explanation	Commentary
	should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	reported.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Information considered material to the reader's understanding of the Exploration Results has been reported. in the body of the text and significant results have selectively been reported to provide the reader with the potential tenor and widths of the mineralisation • APPENDIX 1- contains the location, drill holes details and assay results as received for the July 2023 drill program. • Holes denoted with NSR indicated that no mineralisation over 7% Mn was detected in that hole.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• All information considered material to the reader's understanding and context of the RC Exploration Results have been reported.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further work is planned that includes further infill drilling and diamond core drilling for large scale metallurgical testwork. • Down hole geophysical surveys for magnetic susceptibility density and gamma radiation to be completed and will be used to update the lithological logging. • It is anticipated that the targets drilled from this RC program will have potential for eventual economic extraction and Mineral Resources and or Exploration Targets will be generated subject to review of the geological and grade continuity of the drill logging and assays results respectively.