



# BLACK CANYON

## ASX Announcement



21 February 2022

ASX:BCA

## Further thick manganese intersections from the Flanagan Bore LR1 Deposit

### HIGHLIGHTS

- Further assay results have been received from mineral resource extension RC drilling completed at the LR1 Deposit at Flanagan Bore
- The results continue to demonstrate thick zones of manganese enriched shale and include the following significant results:
  - 35m @ 11.7% Mn & 9.4% Fe from surface including (FBRC035)
    - 15m @ 14.7% Mn & 9.7% Fe from 10m
  - 40m @ 11.0% Mn & 8.2% Fe from surface until EOH including (FBRC044)
    - 10m @ 17.4% Mn & 9.6% Fe from 15m
  - 23m @ 11.7% Mn & 8.9% Fe from surface including (FBRC022)
    - 4m @ 14.6% Mn and 7.6% Fe from surface
  - 30m @ 12.1% Mn & 9.3% Fe from 11m (FBRC030)
  - 22m @ 11.0% Mn & 9.4% Fe from surface (FBRC023)
- Significant expansion of the LR1 mineralisation footprint is now confirmed to extend 1,100m along strike and up to 800m cross strike (width)
- An update to the current Inferred Mineral Resource estimate of 15Mt @ 11.3% Mn at LR1 to commence immediately

Australian manganese explorer, Black Canyon Limited (the **Company**)(ASX:BCA), is pleased to announce the remaining assay results from RC drilling completed at the LR1 deposit (Appendix 1). Building on the strong initial results reported on February 8, 2022, the additional drill holes continued to encounter thick zones of manganese enriched shale with the potential to significantly expand the LR1 maiden mineral resource estimate released in October 2021.

**Black Canyon's Executive Director, Brendan Cummins, said** "Having now received all the assay results from LR1, the grade and scale of the deposit can now be fully appreciated. The Company has worked hard to be in this position, with the Maiden Mineral Resource for LR1 announced in October last year and RC drilling completed in December. The Mineral Resource update is scheduled for completion in April, which is a key milestone for the Company having been listed for less than 12 months. The assay

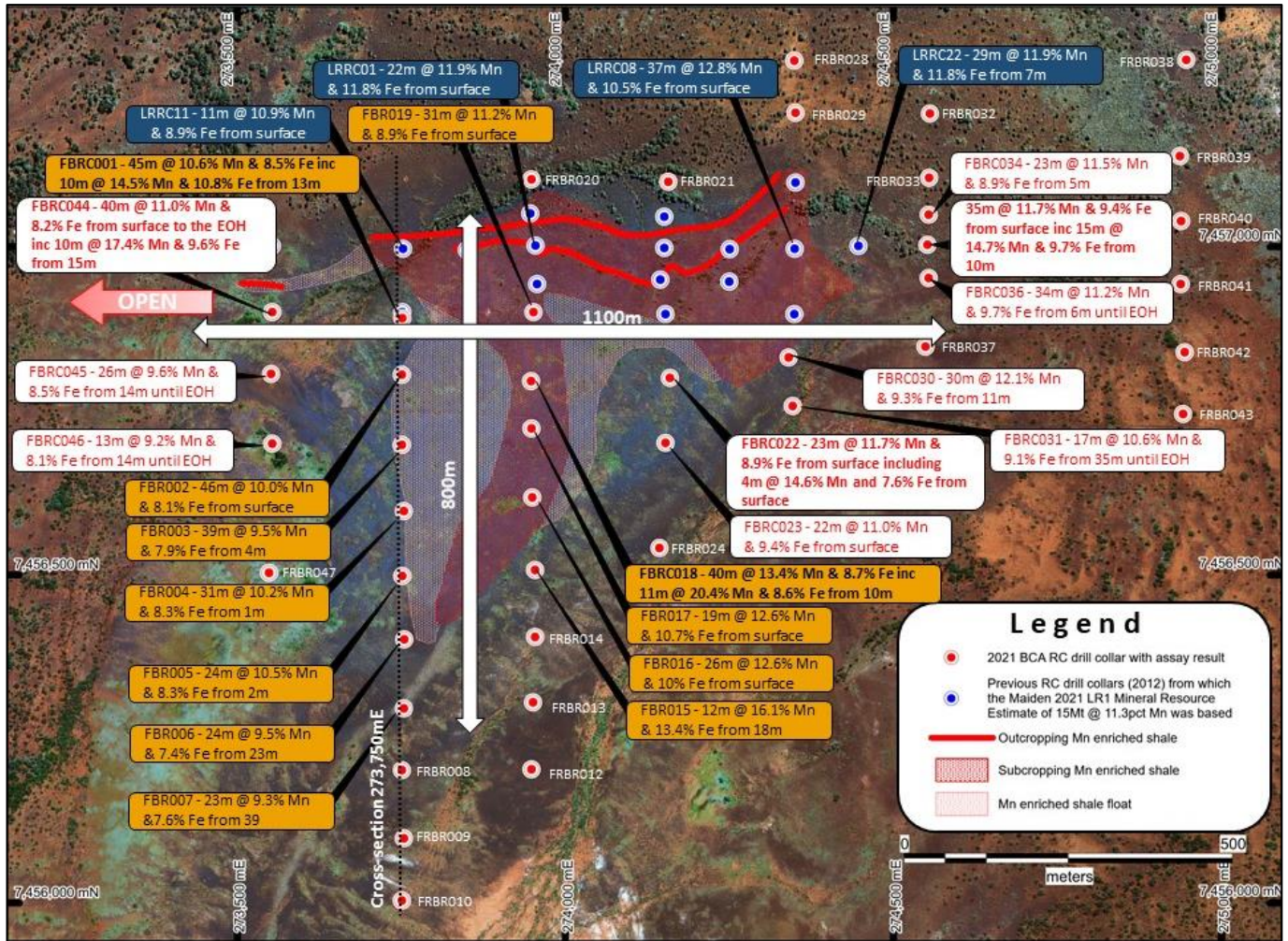
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results are also due for the FB3 prospect and we are confident we can replicate the success achieved at LR1 at FB3 based on the geological similarities observed between the two areas.”

Located 120km north-east of Newman, Black Canyon’s Flanagan Bore tenement is part of the Company’s Carawine Project and is subject to a farm-in and joint venture agreement (the **Agreement**) with Carawine Resources Ltd (ASX:CWX) whereby Black Canyon can earn up to a 75% interest in the Carawine Project tenements.



**Figure 1. LR1 deposit drill plan show new results (white), previously reported (orange) and historic (blue) assay results (BCA earning 75%)**

### Flanagan Bore Drill Program Summary

A total of 168 RC drill holes were completed for 5,569 metres and 13 PQ diamond drill core holes were completed for 477 metres. To date, the Company has received and compiled the assay results from the LR1 deposit area only. A summary of the significant results is provided below and collar details for the drill program completed at LR1 are presented in Appendix 1.

### LR1 Mineral Resource Extension Assay Results

A 900m x 200m zone of the LR1 deposit was previously drill tested and an Inferred Mineral Resource of 15Mt @ 11.3% Mn was estimated<sup>1</sup>. The assays received from the first RC drill program completed by Black Canyon at LR1 have confirmed extensions to the mineralisation to the southwest with 400m to 600m additional cross-strike width now defined. The mineralisation footprint is now 1100m long and up to 800m

<sup>1</sup> ASX:BCA Announcement 5 October 2021 - Maiden Manganese Resource for LR1 Prospect at Flanagan Bore

wide based on assays results from the drilling to date. The mineralisation is open to the west but appears to be offset to the NE which will require additional drilling to confirm. Infill drilling is planned and will be undertaken during the 2022 field season.

Significant results are shown in plan and section in Figures 1 & 2 respectively and listed below.

- **35m @ 11.7% Mn & 9.4% Fe from surface including (FBRC035)**
  - 15m @ 14.7% Mn & 9.7% Fe from 10m
- **40m @ 11.0% Mn & 8.2% Fe from surface until EOH including (FBRC044)**
  - 10m @ 17.4% Mn & 9.6% Fe from 15m
- **23m @ 11.7% Mn & 8.9% Fe from surface including (FBRC022)**
  - 4m @ 14.6% Mn and 7.6% Fe from surface
- **30m @ 12.1% Mn & 9.3% Fe from 11m (FBRC030)**
- **22m @ 11.0% Mn & 9.4% Fe from surface (FBRC023)**
- **34m @ 11.2% Mn & 9.7% Fe from 6m until EOH (FBRC036)**

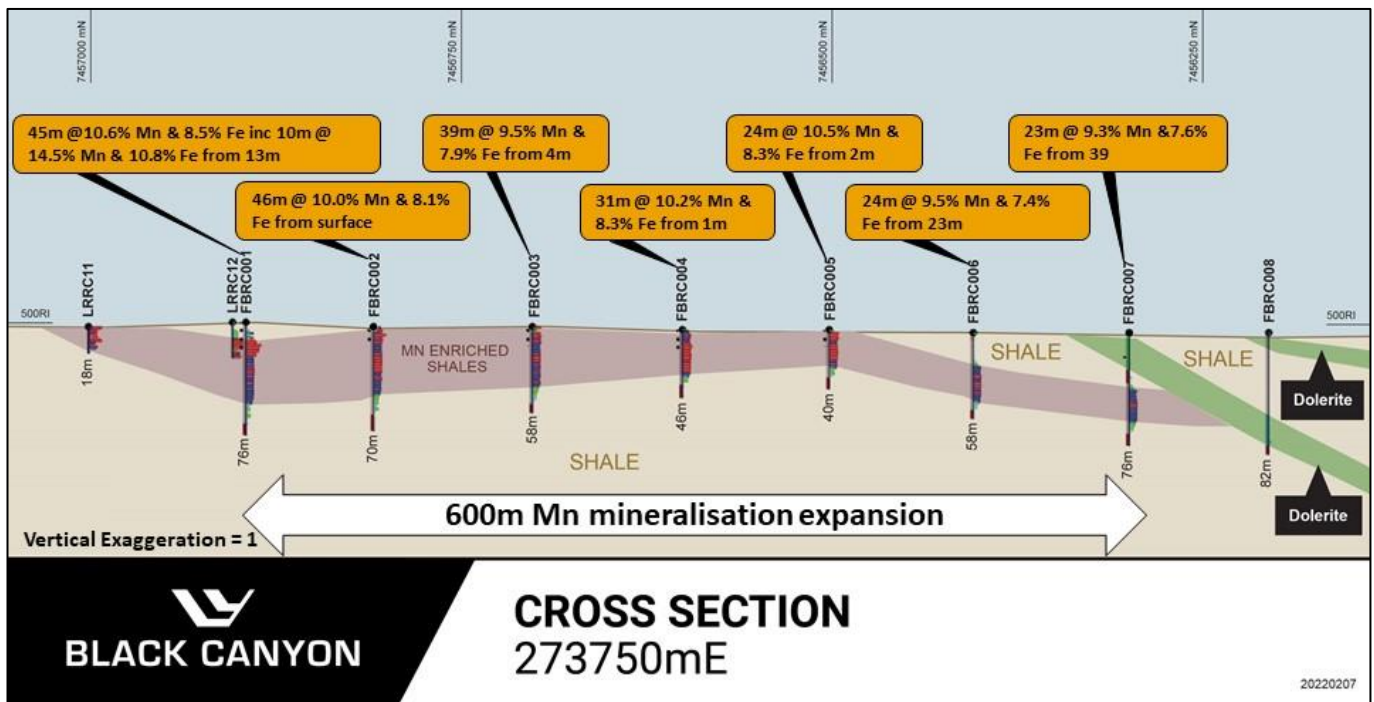


Figure 2. LR1 deposit cross section 273,750mE showing significant results from the LR1 drill program (looking east)

### FB3/FB4 Prospects

The Company is awaiting the assay results from drilling completed into FB3 (Figure 3), with the potential to deliver a second Mineral Resource at Flanagan Bore. Manganese mineralisation was encountered in all of the diamond drillholes extending along the fold axis for a strike length of 600m. The RC drilling program encountered widespread manganese mineralisation across both the FB3 and FB4 prospects covering an area 800m x 800m, using a 200m x 100m grid drill pattern. There had been no previous drilling at FB3/FB4 but the RC drill program has visually confirmed the presence of thick intervals of manganese enriched shales at FB3.

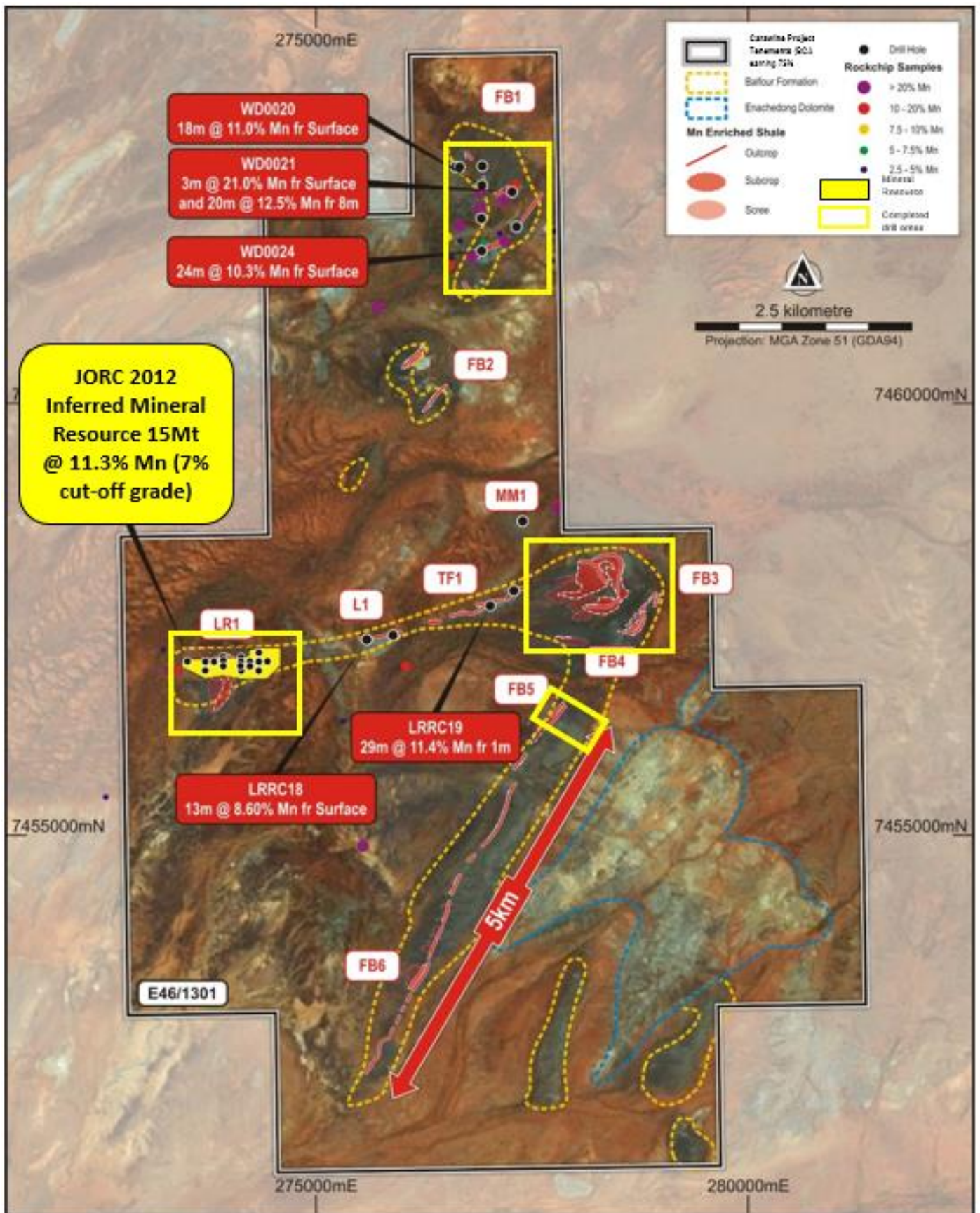


Figure 3. Flanagan Bore Project with the LR1 MRE outline and 2021 drill areas over prospective manganese targets (Black Canyon Earning to 75%)

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

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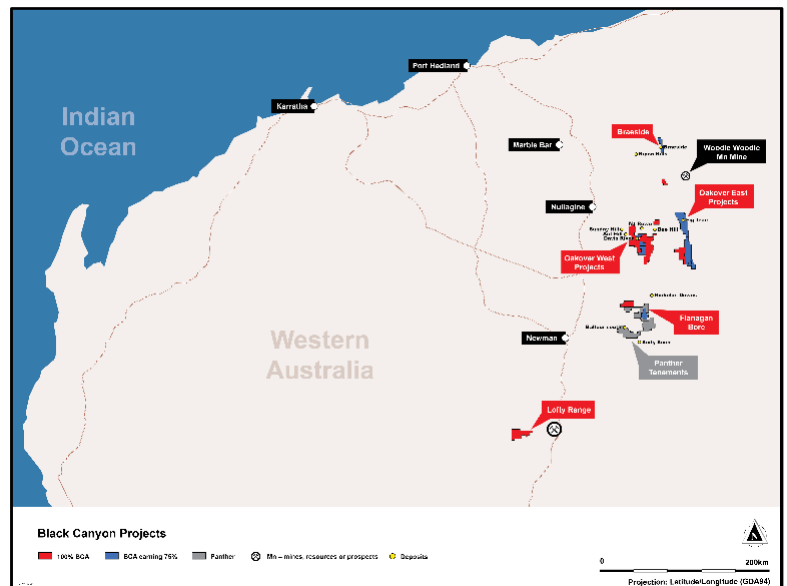
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## About Black Canyon

Black Canyon has entered into a farm-in and joint venture with ASX listed Carawine Resources Limited (ASX:CWX) to acquire a majority interest in the Carawine Project in Western Australia. The Carawine Project covers approximately 800km<sup>2</sup> of tenure located south of the operating Woodie-Woodie manganese mine, providing a large footprint in a proven and producing manganese belt. Black Canyon has also applied for and acquired other exploration licenses adjacent to the Carawine Project that would increase the total land holdings to over 2500km<sup>2</sup> on grant. In addition to manganese, the Carawine Project also hosts multiple copper occurrences including the Western Star prospect which comprises a large zone of surface copper enrichment.

The Company has also secured the Lofty Range manganese project located immediately to the west of the Butcherbird manganese deposit being developed by Element 25.

Manganese and copper continue to have attractive fundamentals with growing utilisation in the battery mineral sector and challenging supply conditions.



## 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 and 8 February 2022, 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 the JORC Table 1 appendices that relate to Exploration Results and Mineral Resources in the original market announcements.

## Appendix 1. Flanagan Bore drill collar information and assay results from the LR1 Deposit December 2020 RC drill program

Hole id	Prospect	East (GDA94)	North (GDA94)	RI	EOH (m)	Dip	Azimuth	From (m)	To (m)	Interval (m)	Mn (%)	Fe (%)	Results
FBRC001	LR1	273751	7456893	503	76	-90	360	10	55	45	10.6	8.5	45m @ 10.6% Mn & 8.5% Fe from 10m inc 10m @ 14.5% Mn & 10.8% Fe from 13m
FBRC002	LR1	273750	7456807	500	70	-90	360	0	46	46	10.0	8.1	46m @ 10.0% Mn & 8.1% Fe from surface
FBRC003	LR1	273750	7456700	500	58	-90	360	4	43	39	9.5	7.9	39m @ 9.5% Mn & 7.9% Fe from 4m
FBRC004	LR1	273753	7456599	498	46	-90	360	1	32	31	10.2	8.3	31m @ 10.2% Mn & 8.3% Fe from 4m
FBRC005	LR1	273751	7456500	498	40	-90	360	2	26	24	10.5	8.3	24m @ 10.5% Mn & 8.3% Fe from 2m
FBRC006	LR1	273754	7456403	496	58	-90	360	23	47	24	9.5	7.4	24m @ 9.5% Mn & 7.4% Fe from 23m
FBRC007	LR1	273753	7456298	496	76	-90	360	39	62	23	9.3	7.6	23m @ 9.3% Mn & 7.6% Fe from 39m
FBRC008	LR1	273750	7456204	496	82	-90	360						NSR
FBRC009	LR1	273753	7456100	496	64	-90	360						NSR
FBRC010	LR1	273750	7456005	498	64	-90	360						NSR
FBRC011	LR1	273753	7455931	498	52	-90	360						NSR
FBRC012	LR1	273948	7456205	496	78	-90	360						NSR
FBRC013	LR1	273950	7456307	496	88	-90	360						NSR
FBRC014	LR1	273953	7456407	496	64	-90	360						NSR
FBRC015	LR1	273953	7456509	500	40	-90	360	18	30	12	16.1	13.4	12m @ 16.1% Mn & 13.4% Fe from 18m
FBRC016	LR1	273949	7456620	500	40	-90	360	0	26	26	12.6	10.0	26m @ 12.6% Mn & 10% Fe from surface
FBRC017	LR1	273948	7456725	500	34	-90	360	0	19	19	12.6	10.7	19m @ 12.6% Mn & 10.7% Fe from surface
FBRC018	LR1	273947	7456797	502	58	-90	360	0	40	40	13.4	8.7	40m @ 13.4% Mn & 8.7% Fe from surface inc 11m @ 20.4% Mn & 8.6% Fe from 10m
FBRC019	LR1	273951	7456902	502	52	-90	360	0	31	31	11.2	8.9	31m @ 11.2% Mn & 8.9% Fe from surface
FBRC020	LR1	273948	7457105	502	40	-90	360						NSR
FBRC021	LR1	274156	7457101	504	28	-90	360			0			NSR
FBRC022	LR1	274159	7456802	500	40	-90	360	0	23	23	11.7	8.9	23m @ 11.7% Mn & 8.9% Fe from surface including 4m @ 14.6% Mn and 7.6% Fe from surface
FBRC023	LR1	274152	7456703	502	34	-90	360	0	22	22	11	9.4	22m @ 11.0% Mn & 9.4% Fe from surface
FBRC024	LR1	274143	7456543	500	58	-90	360			0			NSR
FBRC025	LR1	274353	7457592	506	40	-90	360			0			NSR
FBRC026	LR1	274330	7457502	504	40	-90	360			0			NSR
FBRC027	LR1	274350	7457407	502	58	-90	360			0			NSR
FBRC028	LR1	274348	7457286	504	40	-90	360			0			NSR
FBRC029	LR1	274350	7457206	504	40	-90	360	16	19	3	9.2	10	3m @ 9.2% Mn & 10.0% Fe from 16m
FBRC030	LR1	274340	7456833	502	52	-90	360	11	41	30	12.1	9.3	30m @ 12.1% Mn & 9.3% Fe from 11m
FBRC031	LR1	274346	7456759	500	52	-90	360	35	52	17	10.6	9.1	17m @ 10.6% Mn & 9.1% Fe from 35m until EOH
FBRC032	LR1	274555	7457205	506	40	-90	360	18	22	4	10.3	6	4m @ 10.3% Mn & 6.0% Fe from 18m
FBRC033	LR1	274554	7457107	506	40	-90	360	9	15	6	8.6	9.2	6m @ 8.6% Mn & 9.2% Fe from 9m
FBRC034	LR1	274553	7457051	506	40	-90	360	5	28	23	11.5	8.9	23m @ 11.5% Mn & 8.9% Fe from 5m
FBRC035	LR1	274551	7457005	504	40	-90	360	0	35	35	11.7	9.4	35m @ 11.7% Mn & 9.4% Fe from surface inc 15m @ 14.7% Mn & 9.7% Fe from 10m
FBRC036	LR1	274553	7456954	504	40	-90	360	6	40	34	11.1	9.7	34m @ 11.2% Mn & 9.7% Fe from 6m until EOH
FBRC037	LR1	274548	7456850	504	52	-90	360			0			NSR
FBRC038	LR1	274946	7457287	506	40	-90	360			0			NSR



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FBRC039	LR1	274936	7457140	506	40	-90	360			0			NSR
FBRC040	LR1	274938	7457041	508	40	-90	360			0			NSR
FBRC041	LR1	274937	7456945	506	40	-90	360			0			NSR
FBRC042	LR1	274943	7456841	506	40	-90	360			0			NSR
FBRC043	LR1	274941	7456747	506	40	-90	360			0			NSR
FBRC044	LR1	273553	7456902	500	40	-90	360	0	40	40	11	8.2	<b>40m @ 11.0% Mn &amp; 8.2% Fe from surface to the EOH inc 10m @ 17.4% Mn &amp; 9.6% Fe from 15m</b>
FBRC045	LR1	273551	7456808	498	40	-90	360	14	40	26	9.6	8.5	26m @ 9.6% Mn & 8.5% Fe from 14m until EOH
FBRC046	LR1	273553	7456702	498	34	-90	360	21	34	13	9.2	8.1	13m @ 9.2% Mn & 8.1% Fe from 14m until EOH
FBRC047	LR1	273548	7456505	498	28	-90	360	24	28	4	9.4	8.1	4m @ 9.4% Mn & 8.1% Fe from 24m until EOH

NSR – refers to No Significant Result

## 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
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The samples were collected using industry standard Reverse Circulation (RC) drill methods .</li> <li>Drilling was completed by McKays Drilling who completed the entire RC drill program – 168 holes for 5569m</li> <li>There was limited water encountered during the drill program</li> <li>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.</li> <li>The target sample weight was between 2-3kg which is appropriate for the style of mineralisation</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>The drill type is Reverse Circulation (RC) drilling vertical holes</li> <li>The drill diameter us 5 ¼ inch RC using a face sampling hammer</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery was estimated by the geologist on the rig and secondly by assessing the weight of the representative samples delivered to laboratory</li> <li>The drill recoveries were deemed acceptable with supervision of the sampling at the cone splitter</li> <li>No sample bias due to sample loss is evident from the observed sample recoveries</li> <li>The samples were drilled mostly dry again minimising sample bias</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Drillhole logging was completed at the drill rig recording lithology, texture, grain size and colour.</li> <li>1m chip trays were also collected in site, photographed and used to further detailed logging post the drill program</li> <li>The logging was considered appropriate for exploration reporting and eventually Mineral Resource Estimation</li> <li>Every 1m interval as logged and sieved for inspection – 5569m</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The 1m RC samples were gathered by using a levelled cone splitter at the side of the rig</li> <li>The samples were dominantly dry</li> <li>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%</li> <li>The sub sampling technique and quality control procedures is considered appropriate to ensure sample representivity</li> <li>The sample size is considered appropriate for the grainsize and style of mineralisation</li> </ul>
<b>Quality of assay data</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and</li> </ul>	<ul style="list-style-type: none"> <li>The samples were submitted to NATA accredited ALSChemex in Wangara</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>and laboratory tests</b>	<p>whether the technique is considered partial or total.</p> <ul style="list-style-type: none"> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>The 2 – 3kg samples was sub-split to 750gram and pulverised with 85% passing 75µm</li> <li>The sample was then analysed using method ME-XRF26s for manganese ores using fusion disc XRF for Fe, SiO<sub>2</sub>, Mn, Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub>, P<sub>2</sub>O<sub>5</sub>, S, MgO, K<sub>2</sub>O, Na<sub>2</sub>O, CaO, BaO, Cr<sub>2</sub>O<sub>3</sub> and ZrO<sub>2</sub></li> <li>Review of the quality control results received to date that include CRM, blanks, duplicates show an acceptable level of accuracy and lack of bias) and precision has been achieved.</li> <li>In addition ALSCHEMEX has undertaken its own internal QAQC checks using CRM, Blanks and pulp duplicates and no issues have been reported or identified</li> <li>The CP is satisfied that the analysis was completed to an acceptable standard in the context in which the results have been reported</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>The significant intersections have not been verified by independent personnel but have been peer reviewed internally for accuracy</li> <li>Two of the RC drill holes completed in 2021 were designed to twin the 2012 generation of drilling. The results do not show evidence of bias and no assay data has been adjusted</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Once a drill hole was completed the drill collar was located using a GARMIN handheld GPS with an accuracy of +/- 5m</li> <li>The drill collars will be eventually located using a DGPS system once a suitable contractor has been engaged</li> <li>The grid system is UTM zone 51, GDA94 datum</li> <li>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</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The drill spacing of the RC drill program was approximately 200m line spacing with holes drill 100m apart</li> <li>The drill hole spacing is considered appropriate for this stage of initial exploration with further infill drilling planned to increase geological and mineralisation confidence</li> <li>No samples compositing has been applied</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The deposit 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 which does appear at this early stage to terminate the prospective horizon to the south</li> <li>The drill hole orientation otherwise is suitable for this style of mineralisation and considered appropriate and unlikely to introduce sample bias</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>The samples were collected in bulk bags, sealed with cable ties and stored on site until the drill program was completed</li> <li>The samples were then trucked to Perth in two consignments and delivered directly to ALSCHEMEX in Wangara. The .bulka bags were inspected and audited by ALSCHEMEX who did not report any suspicious or tampered samples</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Other than internal review by Company staff no audits have been completed.</li> <li>The CP was on site for the duration of the R 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.</li> </ul>

## 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>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title</li> </ul>	<ul style="list-style-type: none"> <li>The drilling was undertaken on granted tenement E46/1382</li> <li>Black Canyon has a farm-in and joint venture agreement with Carawine Resources Ltd (ASX:CWX), giving Black Canyon the right to earn an initial 51% interest and up to</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p>interests, historical sites, wilderness or national park and environmental settings.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<p>75% in the Carawine Projects that includes E45/1382</p> <ul style="list-style-type: none"> <li>The tenement has a native title Heritage Protection Agreement with the Karlka Nyiyaparli People that required a Heritage Survey to be undertaken prior to ground disturbing activities. To this end an Ethnographic and Archeologic survey was completed prior to commencement of site activities</li> <li>There are no other known impediments to exploring E46/1382</li> </ul>
<p><b>Exploration done by other parties</b></p>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous work on the tenure Includes exploration by Sentinel Mining Company carried out in 1968 in the general area of Balfour Downs. The exploration work included rock chip sampling from the southern edge of E46/784 which returned three samples with manganese values of 21.6 %, 25.7% and 11.4% Mn within manganese surface enrichment of Balfour Shales.</li> <li>Consolidated Global investment Pty Limited ('CGI') owned tenement E46/784 between 2010 and 2015 and carried out exploration work.</li> <li>Early reconnaissance work completed by CGI delineated many occurrences of manganese enriched outcroppings of the Balfour Formation. These north south striking outcrops were continuous over a distance of 1 km with widths of 50 m to 90 m in the LR1 Prospect area. Further exploration work completed by CGI included identification of prospective area using google images and remote sensing, a heritage survey and clearance for drilling using local Martu consultants. CGI completed a reverse circulation drilling programme of 22 holes in July 2012 on E46/784.</li> </ul>
<p><b>Geology</b></p>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Flanagan Bore tenement is located within the Oakover Basin, the edges of which are defined by the Neoproterozoic Fortescue Group. Most of the tenement is covered by quaternary alluvium, sheetwash and outcrop only exists within the southern part and consists of rocks of the Manganese Group, mainly the Encheddong Dolomite and Balfour Formation. The tenement contains widespread manganese scree associated with manganese enriched Balfour Formation shales</li> <li>The LR1 prospect can be separated into three primary units, the upper unmineralised Balfour shale, the mineralised Balfour shale and the lower basal shale unit. The upper unmineralised shale is brown grey in colour and occurs from surface up to 10 m in depth intermittently across the project area.</li> <li>The manganese shale unit contains a supergene enriched manganese horizon which exhibits thickness range between 15 m to 37 m depth gently dipping to the south, progressively thickening to the east-south-east. The manganese layers are confined to distinct banding within the Balfour and there are also minor occurrences of interbedded red/brown shales intermixed within saprolitic clay bands.</li> </ul>
<p><b>Drill hole Information</b></p>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Appendix 1 for a complete listing of the RC drill results reported LR1 by Black Canyon</li> <li>All assay results have now been reported for the LR1 deposit</li> </ul>
<p><b>Data aggregation methods</b></p>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	<ul style="list-style-type: none"> <li>Only length (1m) weighted intervals are included in the text of this release.</li> <li>Manganese intervals have been reported at 7% Mn cut off allowing 1 m of dilution (&lt;7% Mn)</li> <li>Iron intervals have been reported as they coincide with the</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Mn intervals and no cut offs are applied</li> <li>No metal equivalent values are used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>The deposit is mostly flat lying exhibiting a gentle dip of mineralisation to the south, south-west therefore 90 degree angled (vertical) drill holes considered appropriate.</li> <li>The mineralisation of the LR1 prospect is primarily strata bound striking approximately 80 to 90 degrees, gently dipping to the south</li> <li>The drill results reported are interpreted to represent close to true widths of the mineralisation</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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 reported.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>APPENDIX 1- contains the results of the holes completed at LR1. Holes denoted with NSR describing holes without significant manganese results above the &gt; 7% Mn cut-off..</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All information considered material to the reader's understanding and context of the RC Exploration Results have been reported.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Further work is planned that includes: metallurgical testwork on diamond drill core and down hole geophysical surveys for density and lithological mapping</li> <li>The Company is intending to undertake a Mineral Resource Update over LR1 now that all of the drill information has been received and interpreted</li> </ul>