BLACK CANYON

ASX Announcement

17 April 2023 ASX:BCA

Metallurgical Testwork Successfully Delivers Consistent Concentrate Grades Above 30% Mn

- Metallurgical testwork utilising composite samples from the LR01 and FB03 deposits, Flanagan Bore Project successfully deliver consistent manganese concentrate grades between 30% and 33% Mn.
- Black Canyon has commenced discussions with potential off-take partners and expects enquires to increase as the Company continues to de-risk the processing flowsheet to deliver quality manganese concentrate products.
- Significant manganese concentrate results from both lump (8-25mm) and fines (1-8mm) testwork include:
  - **LR01 lump product - up to 32.2% Mn**
  - **LR01 fines product - up to 31.4% Mn**
  - **FB03 lump product - up to 33.2% Mn**
  - **FB03 fines product - up to 33.4% Mn**
- Significant manganese concentrate results from fines (1-8mm) testwork includes:
  - **LR01 fines-only product - up to 32.1% Mn**
  - **FB03 fines-only product - up to 33.0% Mn**
- Overall recoveries from fines-only testwork range between 63 – 76% using scrubbing and washing followed by heavy liquid separation (HLS).
- The results show a consistent and positive trend across the composites tested in terms of lump and fines manganese concentrate grades and recoveries.
- Additional testwork is planned to further refine the test work parameters and examine variability across the deposits at Flanagan Bore and elsewhere across the Company's tenement portfolio.

Australian manganese explorer and developer, Black Canyon Limited (**Black Canyon** or the **Company**) (ASX: BCA) is pleased to provide an update on the metallurgical testwork recently completed by the Company from two representative composite samples generated from PQ size diamond core drilled across the LR1 and FB3 deposits. The delivery of grades as high as 33% Mn has provided further confidence in the ability of these large scale, shale hosted manganese deposits to deliver a consistent and reliable manganese product utilising a straightforward and widely used density separation technique.

The results have also delivered to the Company a clearer understanding of metallurgical trends, behaviour and recoveries that might be expected from ores generated from manganese enriched shales and confirmed deposit scale variations that can be expected between deposits.

Black Canyon Executive Director, Brendan Cummins, said: *"This metallurgical update is the result of four months of testwork and builds significantly upon the Scoping Study testwork completed last year where we compared HLS to ore sorting processing."*

"The Scoping Study testwork led the Company to focus on HLS testwork as a proxy for dense media separation (DMS) due to its simplicity of implementation, widely used application and reliability in operation. We believe these are critical factors in reducing processing risk as we further advance associated feasibility work programs."

"Manganese concentrate grades ranging between 30% and 33% Mn have been achieved in both lump/fines and fines only manganese products, validating the Company's testwork approach. The staged and overall recoveries from the HLS testwork continue to trend positively with further opportunity to increase recovery through additional refinement of flowsheet design.

"This is particularly relevant in the context of the Balfour Mineral Field where the Flanagan Bore project is the most advanced and has been able to demonstrate positive metallurgical results. The Company also intends to progress other potential resource target opportunities across its portfolio in the coming months which include the recently acquired E46/1383 tenement that hosts the KR1 target which is 5km long and has not been drill tested. At Pickering Creek, Balfour East and West targets several kilometres of manganese enriched shale also require drill testing (Figure 1). Should the Company be successful with these resource development endeavours then the scale of the combined project area represents a substantial organic growth opportunity for BCA shareholders."

Flanagan Bore is part of the Company's Carawine JV with JV partner Carawine Resources Ltd ("CWX") (ASX:CWX). Black Canyon has earnt a 75% interest in the Carawine JV Projects with both parties deemed to be contributing to JV expenditure according to their interests. Further JV work programs are subject to the Joint Venture Management Committee finalising and approving the proposed initial 12-month program and budget. The Flanagan Bore Project is located approximately 400 km southeast of Port Hedland in the east Pilbara region of Western Australia.

Metallurgical Testwork Objectives

The objectives of the pre-feasibility level test work completed by BCA was to progress the initial Scoping Study level testwork and this has involved further understanding the material characteristics, scrubbing and sizing analysis, variability, staged and overall recoveries, potential flowsheet design and product marketability based on specifications. The key objective is to reliably produce a consistent manganese concentrate above 30% Mn. Further laboratory scale testwork is planned to potentially further improve on the outcomes reported in this release.

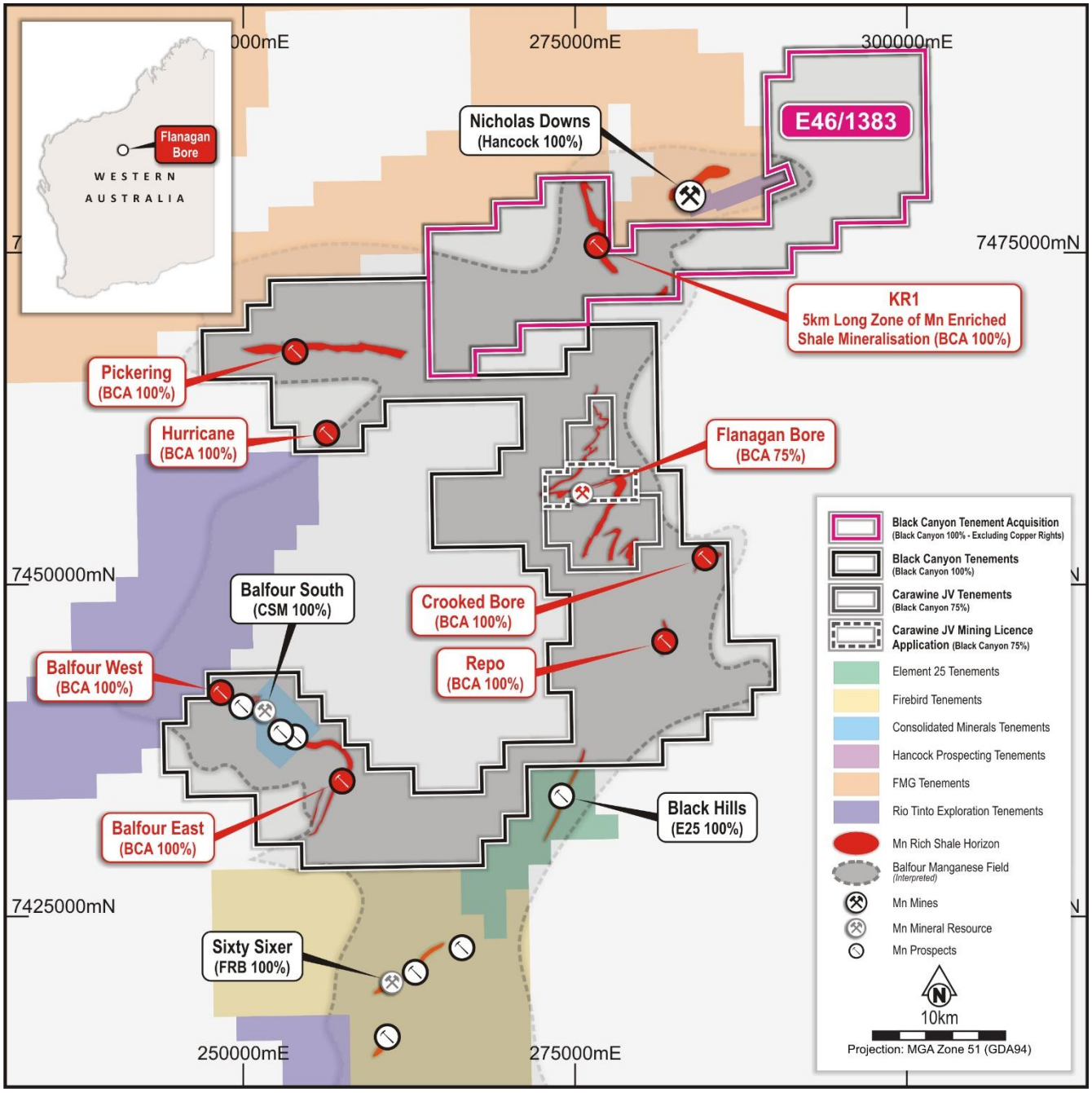

Figure 1. Location of the KR1 target, manganese enriched shale horizon (red solid outlines) and distribution of other manganese targets and mineral resources.

Scrubbing and Washing

Two master composites were generated from the LR1 and FB3 deposits. The drill core samples were composited and thoroughly combined to produce the LR01 and FB03 master composites. The samples were crushed and sized from -150micron to 38mm prior to analysing each screen fraction to understand the grade and size distribution of the manganese from both the LR01 and FB03 feed composites. The -38mm+1.2mm crushed feed sample testwork results from LR01 and FB03 indicate 73% of the crushed material is sized between 6mm and 38mm and 27% is sized between 1.2mm and 6mm.

Two 50 kg composite samples from LR1 and FB3 were crushed to 38mm, then scrubbed and washed for 15 and 20 minutes. Significant manganese grade uplifts from feed grades of 11% and 15% Mn upgraded

to approximately 23% and 24% Mn with minimal manganese losses recorded using a 20 minute wash and scrub. The results of the manganese content upgrades are presented in Table 1.

Table 1. Manganese content upgrades from scrubbing and washing

Composite and scrub time	Calc Feed Mn Grade (%)	Scrubbing and washing Mn grade (%)	Fraction size	Mass (%)	Mn staged recovery (%)	Relative Mn grade increase from feed %
LR01 Feed	11.8	21.1	-38+1mm	52	93	79
LR01 15min scrub	11.0	22.1	-38+1mm	45	89	100
LR011 20min scrub	11.4	23.1	-38+1mm	44	89	103
FB03 Feed	15.5	20.1	-38+1mm	70	90	30
FB03 15min scrub	15.4	23.1	-38+1mm	58	87	50
FB03 20min scrub	15.3	23.6	-38+1mm	55	86	55

The results show a distinct upgrade in manganese content through straightforward first stage crushing, scrubbing and washing to remove a high portion of the clay and shale mass, whilst significantly retaining a high proportion of the manganese content. A slightly longer scrub of 20 minutes versus 15 minutes has a slight and beneficial upgrade in the manganese grade.

Heavy Liquid Separation (HLS)

Optimisation of the beneficiation tests using the scrubbed/washed manganese feed material result in additional manganese grade improvements using HLS, which was used to approximate DMS. Testwork was completed to evaluate a lump (-25+8mm) and fines product (-8mm+1mm) fraction using a 20 minute scrub and various liquid densities.

The HLS test results for the lump and fine fractions are summarised in Table 2.

Table 2. Manganese content upgrades using various density liquids applied to lump and fines.

Composite	Mn Calc Feed Grade (%)	HLS sink Mn grade (%)	Mn staged recovery (%)	HLS Density	Relative Mn grade increase from feed %
LR01 Lump-25mm+8mm	11.4	28.3	98.8	3.0	148
		32.2	79.9	3.4	182
LR01 Fines - 8mm+1mm		27.3	98.1	3.0	139
		31.4	73.6	3.4	175
FB03 Lump-25mm+8mm	15.3	28.2	93.3	3.0	84
		33.2	58.9	3.4	117
FB03 Fines - 8mm+1mm		26.8	89.9	3.0	75
		33.4	51.7	3.4	118

The results are a significant improvement from the Scoping Study testwork with grades achieved above 31.4% Mn and as high as 33.4% Mn using a 3.4 density liquid.

Testwork was also completed to evaluate a fines only product (-8mm+1mm) fraction applying a 20 minute scrub and various liquid densities with the results summarised in Table 3.

Table 3. Manganese content upgrades using various density liquids applied to fines.

Composite	Mn Feed Grade (%)	HLS Mn grade (%)	Mn staged recovery (%)	HLS Density	Relative Mn grade increase from feed %
LR01 Fines -8mm+1mm	11.4	29.7	98	3.2	161
		32.1	95	3.3	182
FB03 Fines -8mm+1mm	15.3	30.3	84	3.2	98
		33.0	82	3.3	116

The fines-only testwork was able to demonstrate the production of a consistent grade above 30% Mn fines product with high staged recoveries using moderate liquid densities.

Overall recovery for the fines-only flowsheet range between 63% and 76% and further work will include additional refinement with studies into the effect of a fines scavenger recovery circuit. The staged recovery data is considered very positive and shows variability across the two manganese deposits at Flanagan Bore. Generally, the FB3 deposit does produce a slightly higher-grade concentrate but at lower staged recovery whilst LR1 still produces a greater than 30% Mn concentrate but at a higher staged recovery. These findings have also achieved another of the metallurgical objectives of understanding variability and grade recovery relationships between the deposits which will facilitate additional testwork programs.

Based on the HLS testwork completed to date, the Company has been able to refine the experimental processing flowsheet and has achieved the metallurgical objectives of delivering greater than 30% Mn products at various liquid densities using well known and proven density-based methodologies. Some additional variability testwork is yet to be undertaken on the coarser banded manganese mineralisation that forms part of the lower LR1 deposit. Overall, the positive results have provided confidence to continue to optimise the flowsheet and scaled-up test work using larger dense media separation (DMS) processing circuitry.

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

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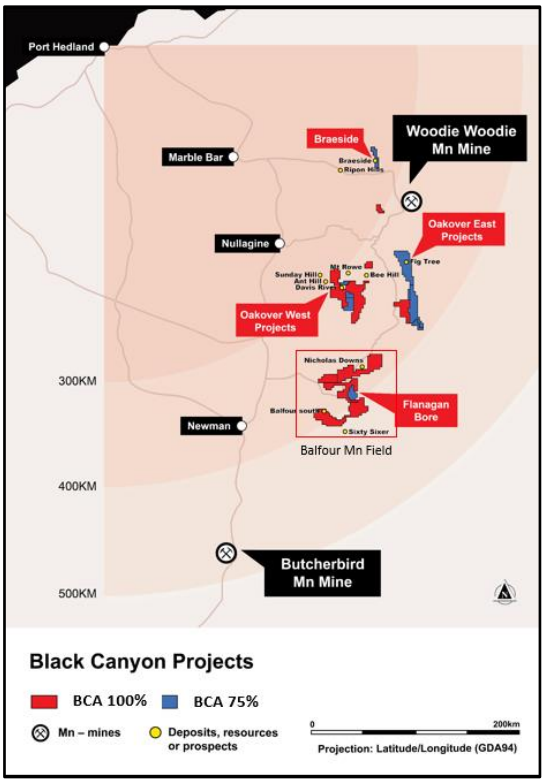
About Black Canyon

Black Canyon holds 75% and is the manager of the Carawine joint venture with ASX listed Carawine Resources Limited (ASX:CWX). The Carawine JV Project covers approximately 800km^2 of tenure in Western Australia, located south of the operating Woodie-Woodie manganese mine, providing a large footprint in a proven and producing manganese belt. Black Canyon has also been granted or acquired other exploration licenses (100%) adjacent to the Carawine Projects that increase the total land holdings to over 2,750 km^2. 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.

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.

The information in this report that relates to metallurgical test work results is based on information reviewed by Mr David Pass, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Pass is an employee of BatteryLimits and consultant to Black Canyon Limited. Mr Pass has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical beneficiation thereof to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr Pass consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

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 2022 November 2022, 5 December 2022, 28 December 2022, 14 February 2023 and 27 March 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.

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Appendix 1. Flanagan Bore Diamond drill collar information and metallurgical composite assay results from LR01 Upper and FB03

Hole id	Prospect	RC twin hole	East (GDA94)	North (GDA94)	RI	EOH (m)	Dip	Azimuth	Metallurgical Composite ID	From (m)	To (m)	Mn (%)	Weight (kg)
DDLR01	LR1	LLRC08	274351	7456998	509	42.4	-90	360					
DDLR02	LR1	LLRC06	274135	7456947	512	22.2	-90	360	LR01	0	14.6	11	138
DDLR03	LR1	FBRC022	274157	7456802	508	42.8	-90	360	LR01	0	18.4		171
DDLR03B	LR1	FRRC018	273948	7456795	506	30.2	-90	360	LR01	0	18.7		154
DDLR04	LR1	LLRC03	273957	7456935	509	32.1	-90	360	LR01	0	12.3		107
DDFB301	FB3	FBRC060	278486	7458151	540	54.6	-90	360					
DDFB302	FB3	FBRC066	278268	7458145	536	50.2	-90	360	FB03	0	29.6	15	263
DDFB303	FB3	FBRC076	278160	7457962	527	44.1	-90	360	FB03	0	12.5		100
DDFB304	FB3	FBRC083	277971	7457859	523	42.7	-90	360					
DDFB305	FB3	FBRC079	278291	7457706	526	30.6	-90	360					
DDFB101	FB1	WD0023	277322	7462046	519	30.6	-90	360					
DDFB102	FB1	WD0021	277274	7462447	523	30.7	-90	360					
DDFB103	FB1	FBRC163	276724	7462627	521	24.7	-90	360					

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 diamond drilling (DD) methods . • Drilling was completed by Topdrive Drilling who completed the entire DD drill program – 13 holes for 478m • The drilling and sample techniques are considered representative for the style of mineralisation utilising conventional triple tube equipment to maximise recoveries
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 diamond core (DD) drilling vertical holes • The external drill diameter us 122mm but the PQ3 core diameter of 83mm
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.*	• Core recovery was estimated by the geologist on the rig and secondly by measuring the length of the core recovered between metre intervals and calculating the overall recovery • The drill recoveries were deemed acceptable • No sample bias due to sample loss is evident from the observed sample recoveries
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 site recording lithology, texture, grain size and colour plus geotechnical parameters – RQD and fracture counting. • The core trays were photographed wet and dry and used to further detailed logging post the drill program • The logging was considered appropriate for exploration reporting and eventually metallurgical and geotechnical evaluations • Every 1m interval as logged for the entire drill program – 478m
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 diamond drill metallurgical composites core samples were not cut or assayed. Full core was used for the metallurgical testwork programs • The grades were approximated from twin RC drill holes • 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 diamond drill metallurgical composites core samples were not cut or assayed. Full core was used for the

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.*	metallurgical testwork programs • The grades were approximated from twin RC drill holes • The RC samples were submitted to NATA accredited ALSChemex in Wangara • The 2 – 3kg samples was sub-split to 750gram and pulverised with 85% passing 75µm • The sample was then analysed using method ME-XRF26s for manganese ores using fusion disc XRF for Fe, SiO2, Mn, Al2O3, TiO2, P2O5, S, MgO, K2O, Na2O, CaO, BaO, Cr2O3 and ZrO2 • 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, ALSCHEMEX 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 diamond drill metallurgical composites core samples were not cut or assayed. Full core was used for the metallurgical testwork programs • The grades were approximated from twin RC drill holes • The significant intersections have not been verified by independent personnel • 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
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 DD hole was completed the drill collar was located using a GARMIN handheld GPS with an accuracy of +/- 5m • The drill collars will be eventually located using a DGPS system once a suitable contractor has been engaged • 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.*	• At LR1 and FB3 drill spacing of the DD drill program is not relevant because they are do not form part of a MRE • They were located to approximate a range of manganese grades and geological variations • The diamond core metallurgical samples were selected and composited
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 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 • 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 diamond core was secured to pallets and stored on site until the drill program was completed • The samples were then trucked to Perth in one consignments and delivered directly to ALSCHEMEX in Balcatta
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 the duration of the DD and 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 land tenure status	• *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.* • *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.*	• Black Canyon has a farm-in and joint venture agreement with Carawine Resources Ltd (ASX:CWX), Black Canyon has earnt 75% interest with funding provided by BCA and CWX based on their respective ownership portions • 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 • There are no other known impediments to exploring E46/1301
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• 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. • Consolidated Global Investment Pty Limited ('CGI') owned tenement E46/784 between 2010 and 2015 and carried out exploration work. • 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.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Flanagan Bore tenement is located within the Oakover Basin, the edges of which are defined by the Neoarchaean 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 • 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. • The manganiferous shale unit contains a supergene enriched manganiferous 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.

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*
		• Refer to Appendix 1 for a complete listing of the DD drill holes completed at LR1, FB3 and FB1 by Black Canyon

Criteria	JORC Code explanation	Commentary
	Person should clearly explain why this is the case.	
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.*	• The diamond drill metallurgical composites core samples were not cut or assayed. Full core was used for the metallurgical testwork programs • The grades were approximated from twin RC drill holes • Only length (1m) weighted intervals are included in the text of this release. • Manganese intervals have been reported at 7% Mn cut off allowing 1 m of dilution (<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 region is mostly flat lying exhibiting a gentle dip of mineralisation to the south, south-west therefore 90 degree angled (vertical) drill holes considered appropriate. • The mineralisation of the LR1 prospect is primarily strata bound striking approximately 90 degrees, gently dipping to the south about a regional syncline • The mineralisation of the FB3 prospect is primarily strata bound striking approximately 45 degrees, gently dipping to the southeast about a regional syncline. • The drill results reported are interpreted to represent close to true widths of the mineralisation
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• 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.
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 results of the DD holes drilled into LR1 and FB3 used for the metallurgical testwork
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 metallurgical testwork on diamond drill core and then bulk sampling on site of various mineralogical domains once the flowsheet design has been well advanced • The Company is considering piloting of the bulk samples to confirm the flow sheet design