BLACK CANYON

ASX Announcement

5 July 2023 ASX:BCA

High-grade Manganese Rock Chip Samples up to 54% Mn at the Wandanya Project

- **Reconnaissance sampling over the Wandanya (E46/1407) tenement (BCA 100%) has delivered high-grade surface rock chip samples up to 54% manganese (Mn).**
- **Two samples taken 100m apart (across strike) returned 52.9% and 54.3% Mn from an outcrop that is approximately 300m long and 150m wide at the W2 prospect.**
- **Other samples targeting manganese across the tenement ranged between 12.2% and 33.5% Mn.**
- **No previous surface sampling or historic drilling has been completed over the outcropping mineralisation.**
- **Future exploration plans include additional mapping, sampling and gradient array IP (GAIP) to generate drill targets.**

Australian manganese explorer and developer, Black Canyon Limited (**Black Canyon** or the **Company**) (ASX: BCA) is pleased to announce that reconnaissance mapping and rock chip sampling completed over the Wandanya Project has identified high-grade manganese mineralisation.

The sampling program was part of the initial assessment of the tenement to determine geological setting and mineralisation potential. The Wandanya tenement is located on the eastern boundary of the Oakover Basin and approximately 80km south of the Woodie Woodie manganese mine. Further work is planned to follow-up the results and continue mapping along strike to north.

Black Canyon's Executive Director Brendan Cummins said:

"The high-grade manganese rock chip results encountered over the Wandanya Project contain approximately 20% more manganese than previous surface mineralisation we have sampled related to manganese enriched shales which commonly range between 25 and 35% Mn. The 50% plus Mn grades at Wandanya are more akin to those related to hydrothermal or contact style manganese enrichment which presents a new targeting opportunity for the Company.

"These early results are very encouraging given the grade of samples and similarities in geological setting to the Woodie Woodie manganese mine. The outcrop is approximately 300m long and 150m wide and to the north there appears to be further mineralisation that will be followed up with mapping and additional sampling."

Figure 1. Sample site W003 – 52.9% Mn showing manganese enrichment on tenement E46/1407 at prospect W2.

Wandanya Manganese Mineralisation

The high-grade manganese mineralisation encountered at the W2 prospect outcrops over 300m strike and is up to 150m wide forming a gently sloping rounded hill. The mineralisation has been mapped as a mixed manganese dominant ferruginised breccia, with some relict bedding and hosted by dolomite. The area is structurally complex with multiple NE and NW-trending cross cutting faults mapped from aerial imagery. Further work is planned to evaluate the significance of the discovery which will include the evaluation of sub-cropping manganese mineralisation interpreted to the north and along strike that extends discontinuously for a further 1 to 2km.

Table 1. Rock chip samples from E46/1407 – Wandanya

Sample ID	East GDA94	North GDA94	Tenement	Prospect	Mn %	Fe %	Al %	Si %	Description
W003	322704	7523872	E46/1407	W2	**52.9**	2.2	0.8	2.7	High-grade manganese iron breccia
W004	322610	7523855	E46/1407	W2	**54.3**	1.4	1.5	1.4	High-grade manganese iron breccia
W005	317082	7533146	E46/1407	W3	**33.6**	4.7	3.8	10.6	Manganese-iron oxide
W006	316697	7533864	E46/1407	W4	**33.3**	3.3	3.8	11.1	Manganese-iron oxide
W007	314469	7535547	E46/1407	W5	**12.8**	11.1	4.5	22.2	Manganese-iron oxide
W008	313837	7535740	E46/1407	W6	**12.2**	4.5	0.9	32.9	Manganese-iron oxide
W009	313805	7535745	E46/1407	W6	**19.1**	3.2	1.2	27.7	Manganese-iron oxide
W010	313805	7535745	E46/1407	W6	**17.3**	3.8	0.5	30.3	Manganese-iron oxide

Figure 2. Sample site W004 – 54.4% Mn showing manganese enrichment on tenement E46/1407 at prospect W2.

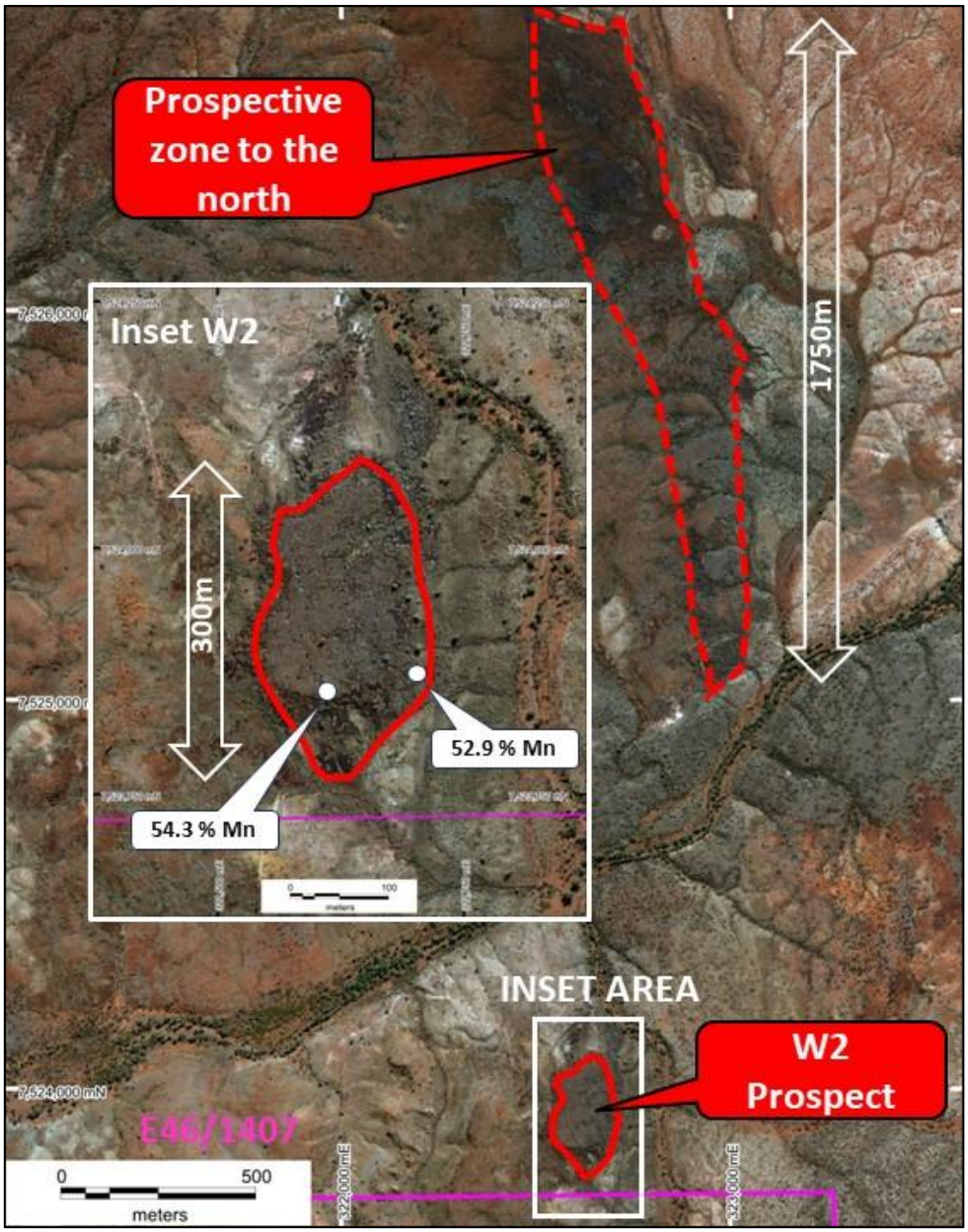

Figure 3. W2 prospect, Wandanya Project (E46/1407) showing high-grade manganese results and prospective zone to the north that requires additional mapping and sampling

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

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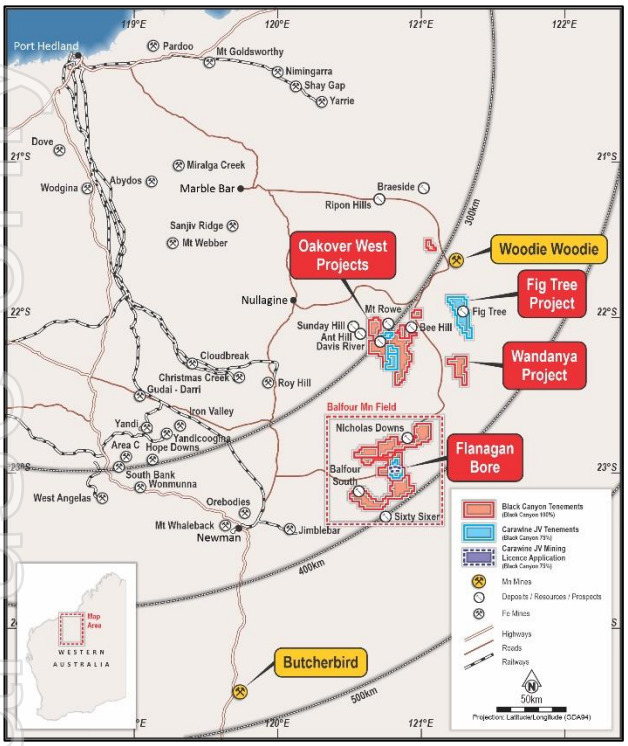
About Black Canyon



Black Canyon has consolidated a significant land holding in the underexplored Balfour Manganese Field and across the Oakover Basin.

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 (ASX:CWX). Combined, the projects cover approximately 2,500km^2 of tenure in Western Australia, providing a dominant footprint in a proven and producing manganese belt.

Manganese continues to have attractive fundamentals where it is essential and non-substitutable in the manufacturing of steel 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 2022 November 2022, 5 December 2022, 28 December 2022, 14 February 2023, 27 March 2023 and June 1 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.

Appendix 1. 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.*	• Point surface samples consisting of rock chips of outcropping rock, to a nominal 0.3 - 2kg weight. • Each sample was described at the site and time of collection to ensure accurate records of sampled material. Samples were selected based on mineralisation / alteration zones, or to distinguish low level alteration indicating potential mineralisation at depth. • The samples are selective but representative of the outcrop from which they were taken. • Rock chip sampling is an industry wide field technique for establishing metal content to understand potential tenor of the underlying 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).*	• Not applicable
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.*	• Not applicable
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.*	• All samples have been logged at the time and location of collection, enabling them to be placed in geological context. • All surface samples have been logged to high detail.
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.*	• Samples were collected dry and consisted of multiple chips dislodged and fractured by a geological pick. • Samples were between a nominal 0.3-2kg weight and placed directly in to numbered calico bags at the collection point. • Appropriate assay techniques were designated at the point of collection based on the perspective commodity. • Single point samples.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and 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 samples were submitted to NATA accredited ALSChemex in Wangara • The 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 • In ALSCHEMEX has undertaken its own internal QAQC checks using CRM,

Criteria	JORC Code explanation	Commentary
		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 • No CRM, blanks or duplicates were inserted in the rock chip sequence • The assay data has sufficient quality for the reporting of Exploration Results at this early stage of exploration.
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.*	• Assay results summarised in the context of this report have been rounded appropriately. • The results have been reviewed by other technical members of the Board • 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.*	• Sample locations were surveyed by a hand held GPS +/-5m, at the time of sample collection. • RL was not recorded and is not relevant to surface point samples. • Coordinates reported are GDA Zone 51. • Location data is considered to be of sufficient quality for reporting of exploration results at this early stage.
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.*	• Selective sampling based on field observation and outcrops identified as hosting potential for mineralisation. • Should not be considered representative of the rock mass as a whole but an indication of the local grade at surface
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.*	• Samples are representative only of the material sampled and based on surface outcrops it is unknown if the samples have a bias related to orientation of structures or mineralised horizons.
Sample security	• *The measures taken to ensure sample security.*	• The samples are generally placed in a calico bag and then secured in a polyweave bag that is zip locked. • The analysing laboratories will normally report any tampering or missing samples. • This is not considered a high risk given the Project location.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Not applicable at this early stage of exploration

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.*	• The rock chip samples were all taken from tenements E46/1407 • Black Canyon owns these licenses 100% • The tenement is subject to Native Title and forms part of a Heritage Agreements with the Karlka Nyiyaparli People
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration work on the tenements is limited with the target mentioned in this release remaining undrilled • Some historic drill was completed further to the north but the results failed to deliver material evidence of mineralisation
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 and outcrop only exists within the southern part and consists of rocks of the Manganese Group, mainly the Encheddong Dolomite and Balfour Formation. The tenements contains widespread manganese scree associated with manganese enriched Balfour Formation shales • The hydrothermal styles of mineralisation are typically located inside and at the contact between the Carawine Dolomite and the Pinjian Chert from the upper Hamersley Group. The mineralisation shows a distinct alteration haloe with the high core dominated by manganese radiating out to iron oxides such as geothite and limonite.

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.*
		• All rock chip location data is presented in the text

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.*	• No data aggregation has been undertaken on single point samples

Criteria	JORC Code explanation	Commentary
	• *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.*	
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').*	• No drill widths or intervals reported
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.*	• See body of the release for geology and tabulation of surface sample assays
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 sampling and results have been reported in the body of the text
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 Exploration Results have been reported. • All rock chip data has been reported in the body of the text
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: detailed site inspections, mapping surface sampling, geophysical surveys Heritage surveys and RC or AC drilling of the priority targets.