



BLACK CANYON

ASX Announcement



February 14 2023

ASX:BCA

Exploration and Manganese Sulphate Update

- A number of high quality regional targets have been generated from mapping, geochemical prospecting and target ranking with plans to drill the high priority targets in the June quarter
- At Balfour South (100% BCA), well mineralised horizons of undrilled manganese enriched shale has been traced intermittently across several kilometres of strike with rock chip samples ranging between 22% and 35% Mn.
- At Pickering (100% BCA), 10km strike of outcropping undrilled manganese enriched shale with multiple rock chip samples returning between 12% and 19% Mn has been identified. Pickering shows broad similarities in terms of scale and surface enrichment to the Flanagan Bore deposit.
- On other tenements manganese enriched shale and smaller hybrid hydrothermal/sediment enriched manganese or hydrothermal manganese targets have been identified and require further investigation
- In conjunction with this regional exploration program, the Company is also commencing a variability sampling program across these targets to ascertain the amenability of a range of manganese oxide sources to generate High Purity Manganese Sulphate Monohydrate (HPMSM) suitable for the battery manufacturing industry

Australian manganese explorer and developer, Black Canyon Limited (**Black Canyon** or the **Company**) (ASX:BCA), is pleased to announce an update on exploration activities and an additional HPMSM study with the objectives of establishing further mineralisation potential and a clearer understanding of the variability and amenability to HPMSM downstream processing from across the Companies tenement portfolio.

Black Canyon Executive Director, Brendan Cummins, said: “During the wet season the Company has taken advantage of the field break to work up a number of new, high-potential manganese targets. With the compilation of field mapping and geochemical data we have generated multiple targets showing grade and/or scale potential.”

“With the completion of our highly successful drill campaigns at Flanagan Bore in 2021/2022 we can leverage off our experience in the region that provides us with a clear advantage in understanding mineralisation potential to reduce exploration risk, so we are drilling the most compelling targets. Significantly the majority of these targets have never been drilled which represents an outstanding opportunity for Black Canyon to make further discoveries in the region”

ASX Code: BCA

Registered Address
283 Rokeby Road
Subiaco, WA, 6008

Telephone: +61 8 9426 0666
Email: info@blackcanyon.com.au
Website: www.blackcanyon.com.au

“In addition, we are advancing a variability study evaluating the amenability of various manganese oxide mineralisation styles to HPMSM processing. As part of the planned HPMSM Scoping Study due for release later in the year, the Company will examine sourcing manganese oxide feedstocks from across our project base in the Eastern Pilbara that would secure supply for many decades. There may be the opportunity to develop a low CAPEX, small mining facility that could be permitted and approved relatively quickly. This would potentially reduce the timeframes for Black Canyon to supply manganese oxide feedstock to a downstream HPMSM facility.”

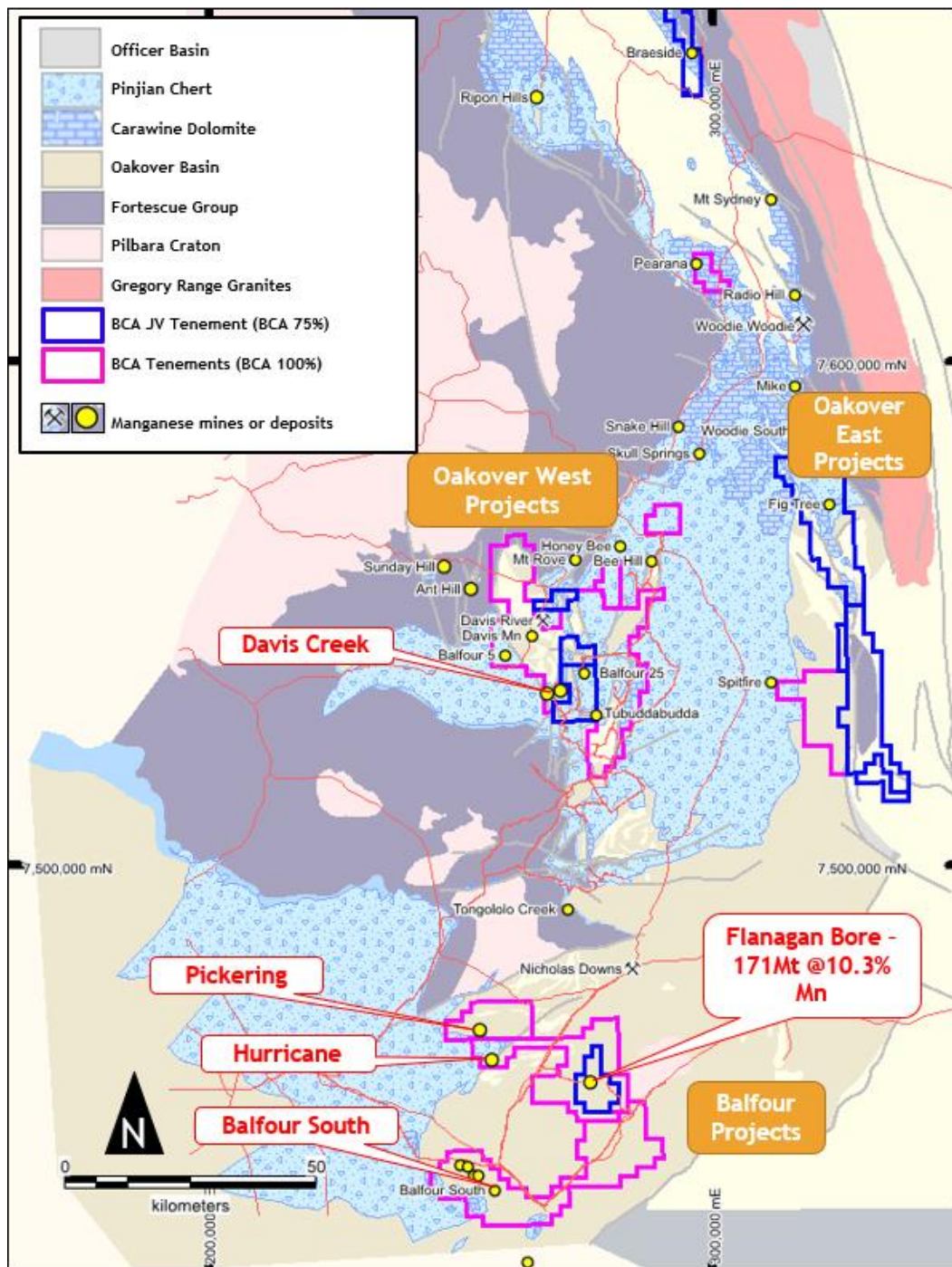


Figure 1. Location map of manganese targets assessed by Black Canyon (Tenements coloured magenta are held 100% and Tenements in blue are 75% BCA)

Balfour South

Tenement E46/1396 (BCA100%) surrounds mining lease application M46/527 which is owned by Pilbara Manganese Pty Ltd (a subsidiary of Consolidated Minerals Ltd) that hosts a published historic non-JORC Mineral Resource 21.6Mt @ 19.3 % Mn (refer to WAMEX report A77474). Mineralisation at the Balfour South deposit occurs as primary manganiferous shales with supergene enrichment of the shales occurring near surface.

Black Canyon has assessed the strike extents of the Balfour South deposit to the west and east of the mining lease where the prospective manganese enriched-shale horizon is interpreted to trend under thin cover. Approximately 1500m of strike extent is interpreted under cover to the west, whilst to the southeast several kilometres of potential strike has been interpreted based on intermittently outcropping manganese mineralisation and extrapolation to the adjacent stratigraphy. During the mapping phase Black Canyon gathered a number of surface rock chip samples with all of the results displayed in Table 1. The elevated manganese grades at surface are typical and related to the supergene enrichment process similar to those observed at Flanagan Bore.

There has been no historic drilling completed on this target so the Company has prioritised it for a first pass drill program to confirm grade and depth of mineralisation.

Table 1. Rock chip samples from E46/1396 - Balfour South

Sample ID	East WGS84	North WGS84	Tenement	Prospect	Mn %	Fe %	Al %	Si %	P %	Description
PA0064	254648	7437890	E46/1396	Balfour South	37.6	10.2	1.8	5.3	0.1	Manganese enriched shale
PA0065	257183	7435081	E46/1396	Balfour South	30.5	12.9	2.5	9.6	0.3	Manganese enriched shale
PA0066	255957	7432205	E46/1396	Balfour South	34.6	12.2	2.5	7.2	0.2	Manganese enriched shale
PA0067	255443	7433035	E46/1396	Balfour South	22.1	13.0	3.7	13.4	0.1	Manganese enriched shale
PA0068	255590	7433435	E46/1396	Balfour South	28.7	13.1	2.8	10.2	0.1	Manganese enriched shale
PA0086	252033	7430516	E46/1396	Balfour South	51.5	1.7	1.3	1.4	0.1	Crystalline manganese oxide



Figure 2. Balfour South target (E46/1396) showing outcropping manganese enriched shales

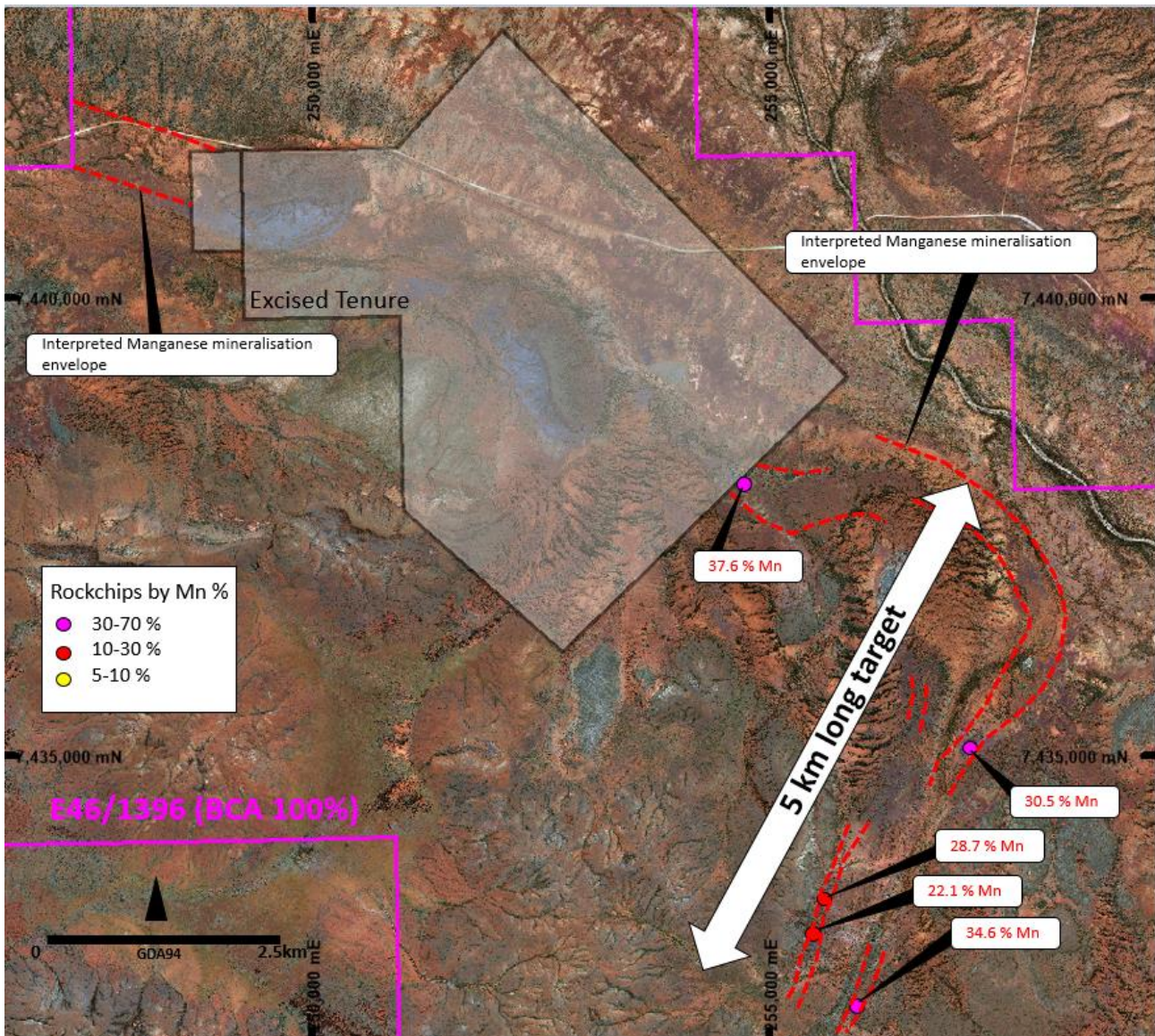


Figure 3 Balfour South tenement (E46/1396, in magenta) and manganese enriched target horizon surrounding excised mining lease application in black (unrelated Company)

Pickering

Located on License E46/1404 (BCA100%) the manganese enriched shale target at Pickering strikes east-west over a distance of 10km. The enrichment forms a subtle rise with a cross-strike width of 200m to 300m and dipping shallowly to the north. Black Canyon has gathered a number of rock chip samples during the mapping phase with all of the sample results displayed in Table 2. Aspects of the Pickering target are similar to that of Flanagan Bore in terms of scale, surface mineralisation and widespread manganese scree haloes which increase the confidence of discovering potentially significant zones of mineralisation at similar grade ranges to that of the rock chip samples.

There has been no historic drilling completed on this target so the Company has prioritised it for a first pass drill program to confirm grade and depth of mineralisation.

Table 2. Rock chip samples from E46/1404 - Pickering

Sample ID	East WGS84	North WGS84	Tenement	Prospect	Mn %	Fe %	Al %	Si %	P %	Description
PA0069	259199	7467748	E46/1404	Pickering	12.5	8.5	1.6	8.6	0.1	Calcareous manganese enriched shale
PA0070	259330	7467735	E46/1404	Pickering	9.0	6.3	2.2	8.6	0.1	Calcareous manganese enriched shale
PA0071	259782	7467687	E46/1404	Pickering	9.6	6.0	2.0	9.2	0.1	Calcareous manganese enriched shale
PA0072	260174	7467594	E46/1404	Pickering	10.8	6.9	1.8	7.6	0.1	Calcareous manganese enriched shale
PA0073	258744	7467669	E46/1404	Pickering	9.9	9.5	1.6	7.5	0.2	Calcareous manganese enriched shale
PA0074	258048	7467652	E46/1404	Pickering	11.7	6.9	1.6	7.9	0.1	Calcareous manganese enriched shale
PA0075	257304	7467638	E46/1404	Pickering	10.4	7.0	2.0	9.6	0.1	Calcareous manganese enriched shale
PA0076	256709	7467727	E46/1404	Pickering	15.0	9.0	1.5	7.7	0.1	Calcareous manganese enriched shale
PA0077	257384	7467721	E46/1404	Pickering	9.0	6.2	2.0	7.7	0.1	Calcareous manganese enriched shale
PA0078	255726	7467910	E46/1404	Pickering	13.4	8.9	1.4	7.7	0.2	Calcareous manganese enriched shale
PA0079	254923	7467890	E46/1404	Pickering	13.4	8.8	2.0	9.9	0.1	Calcareous manganese enriched shale
PA0080	253978	7467783	E46/1404	Pickering	11.2	8.3	1.5	7.3	0.1	Calcareous manganese enriched shale
PA0081	253183	7467773	E46/1404	Pickering	8.8	6.3	1.7	7.6	0.1	Calcareous manganese enriched shale
PA0082	252316	7467620	E46/1404	Pickering	8.9	6.9	1.9	7.9	0.1	Calcareous manganese enriched shale
PA0083	252410	7471274	E46/1404	Solomon	19.0	26.1	0.8	9.0	0.1	Ferruginous manganese oxide

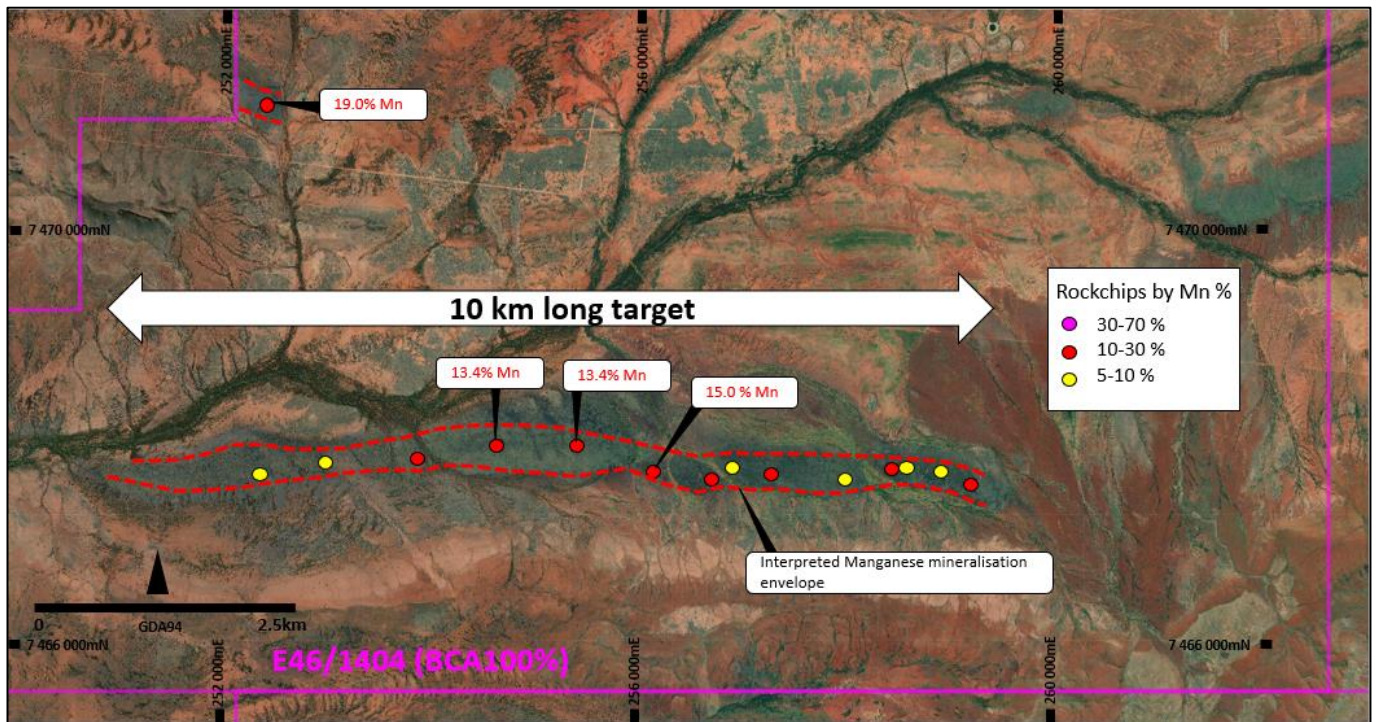


Figure 4. Pickering (E46/1404) showing rock chip samples overlying a significant zone of manganese enriched calcareous shale mineralisation



Figure 5. Typical manganese enriched calcareous shales from Pickering located on E46/1404

Additional targets

A number of smaller footprint, higher-grade targets were also assessed from Davis Creek (E46/1382 BCA100%) and Hurricane (E46/1394 BCA 100%). The targets were mapped as either manganese enriched shale, hybrid hydrothermal/sediment enrichment typically associated with the Balfour Shale or hydrothermal contact mineralisation between the Carawine Dolomite and the overlying Pinjian Chert. The outcrops varying from 200m to 500m across strike typically forming multiple lenses, mounds or linear fault related zones of manganese. Black Canyon has gathered a number of rock chip samples during the mapping phase with all of the sample results displayed in Table 3.

There has been no historic drilling completed into the Davis Creek targets and the Company is assessing it for a first pass drill program to confirm grade and depth of mineralisation.

Table 3. Rock chip samples from E46/1394 – Hurricane and E46/1382 – Davis Creek

Sample ID	East WGS84	North WGS84	Tenement	Prospect	Mn %	Fe %	Al %	Si %	P %	Description
PA0005	257371	7462179	E46/1394	Hurricane	20.3	3.3	0.5	24.9	0.1	Manganese Cht Bx
PA0006	257321	7462138	E46/1394	Hurricane	14.5	1.7	0.5	32.2	0.1	Manganese Cht Bx
PA0007	256554	7463004	E46/1394	Hurricane	46.7	0.9	1.4	9.8	0.0	Hydrothermal Contact mineralisation
PA0008	256537	7463114	E46/1394	Hurricane	42.6	8.6	1.1	5.6	0.0	Hydrothermal Contact mineralisation
PA0009	256496	7462951	E46/1394	Hurricane	44.5	8.8	1.2	3.9	0.0	Hydrothermal Contact mineralisation
PA0084	256696	7463134	E46/1394	Hurricane	40.3	7.3	0.7	8.4	0.0	Hydrothermal Contact mineralisation
PA0010	258646	7464235	E46/1394	Zephyr	42.3	9.0	0.2	7.8	0.0	Hydrothermal Contact mineralisation
PA0011	258667	7464447	E46/1394	Zephyr	53.1	1.9	1.0	1.4	0.0	Hydrothermal Contact mineralisation
PA0012	258766	7464921	E46/1394	Zephyr	35.5	8.1	0.5	10.5	0.0	Hydrothermal Contact mineralisation
PA0013	258455	7465085	E46/1394	Zephyr	22.1	20.7	0.3	12.6	0.0	Manganese Cht Bx
DCCH036	267784	7533432	E46/1382	Davis Creek	42.5	1.3	1.9	6.0	0.1	Manganese enriched shale
DCCH037	268096	7533787	E46/1382	Davis Creek	38.6	2.0	2.8	7.5	0.1	Manganese enriched shale
DCCH038	268430	7534222	E46/1382	Davis Creek	6.9	17.9	0.5	28.6	0.0	Ferruginous manganese fault zone
DCCH039	268546	7534436	E46/1382	Davis Creek	45.3	12.9	1.2	0.9	0.1	Hybrid hydrothermal/sediment enrichment
DCCH040	268842	7534493	E46/1382	Davis Creek	1.0	11.0	6.2	29.8	0.0	Ferruginous shale

DCCH041	268968	7534364	E46/1382	Davis Creek	37.5	17.0	1.8	1.4	0.3	Hybrid hydrothermal/sediment enrichment
DCCH042	269362	7534486	E46/1382	Davis Creek	33.8	23.4	1.7	1.1	0.2	Hybrid hydrothermal/sediment enrichment

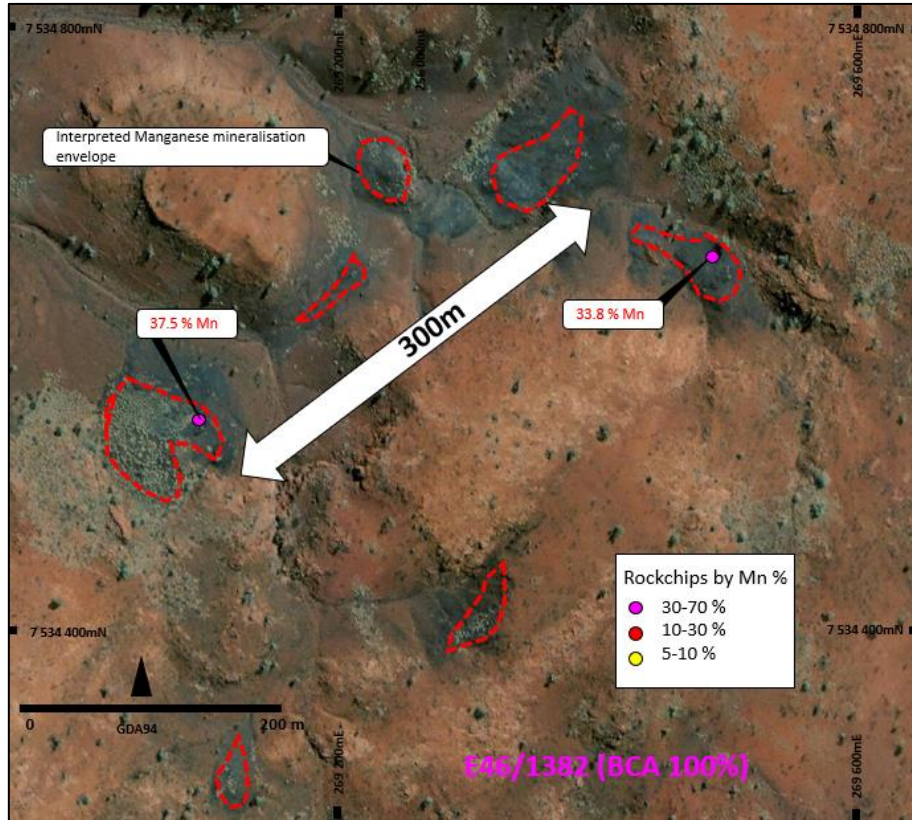


Figure 6. Davis Creek (E46/1382) hybrid hydrothermal/sediment hosted manganese mineralisation

At the Hurricane target, historic RC drilling (FMG 2015) intersected significant manganese mineralisation at the contact between the Pinjian Chert Breccia and the underlying Carawine Dolomite.

Significant historic drill results from surface or close to surface at Hurricane include:

- 10m @ 21.2% Mn from 3m, Including 5m @ 31.4% Mn (WD003)**
- 12m @ 16.4% Mn from 3m, Including 4m @ 29.2% Mn (WD005)**
- 4m @ 23.5% Mn from 6m, Including 3m @ 27.7% Mn (WD002)**
- 2m @ 25.9% Mn from 7m (WD010)**

(For JORC Table 1, refer to ASX release December 2 2021 - Acquisition of strategic tenements adjacent to Flanagan Bore)

The shallow high-grade mineralisation observed at Hurricane requires further assessment prior to planning any drill programs.



Figure 7. High-grade hydrothermal manganese enrichment located at the Hurricane prospect (E46/1394)

HPMSM Variability Study

The Company has identified multiple manganese oxide targets across its tenement portfolio. They include a combination of shale hosted, hydrothermal and hybrid shale/hydrothermal styles of manganese. A total of 6 samples have been collected by shallowly excavating selected outcrops to expose representative manganese enriched mineralisation. Approximately 20kg to 30kg of manganese oxide material has been collected at each site and will be upgraded through simple beneficiation prior to initial leaching testwork. This will enable the Company to determine levels of impurities and undertake chemical comparisons between each manganese oxide mineralisation style.

Based on the various impurity levels observed from the variability samples, selected samples may be purified and crystallised for further analysis. This round of testwork is expected to take 3-4 months to complete with the results to provide further information on the hydrometallurgical processing amenability across a wide range of manganese oxide feed stocks for HPMSM.

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

For further details:

Brendan Cummins
Executive Director

Telephone: +61 8 9426 0666

Email: brendan.cummins@blackcanyon.com.au

For media and broker enquiries:

Fraser Beattie
White Noise Communications

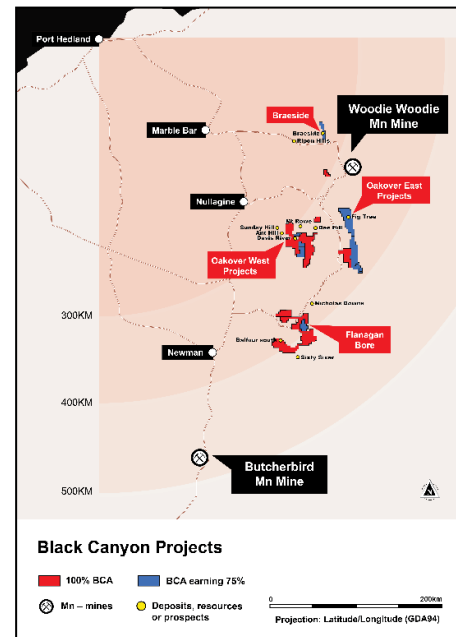
Telephone: +61 8 6374 2907

Email: Fraser@whitenoisecomms.com

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 800km² 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 adjacent to the Carawine Projects that increase the total land holdings to over 2,400 km². 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.

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, 5 December and 28 December 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Point surface samples consisting of rock chips of outcropping rock, to a nominal 0.5- 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	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> Not applicable
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Not applicable
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Samples were collected dry and consisted of multiple chips dislodged and fractured by a geological pick. Samples were between a nominal 0.5-2kg 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The 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 Black Canyon inserted standards every

Criteria	JORC Code explanation	Commentary
		<p>50 samples.</p> <ul style="list-style-type: none"> Review of the quality control results received to date that include CRM show an acceptable level of accuracy and lack of bias) and precision has been achieved. In addition ALSCEMEX 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 No 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 There has been no drilling completed and thus no twin holes No assay data has been adjusted.
Location of data points	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> 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
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The rock chip samples were taken across tenements E46/1382, E46/1404, E46/1394 and E46/1396 Black Canyon owns these licenses 100% The tenements are subject to Native title and forms part of a Heritage Agreements with the Palyku-Jartay, Njamal and Karlka Nyiyaparli People
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Previous exploration work on the tenements is limited with the majority of the targets mentioned in this release remaining undrilled The exception is Hurricane where FMG drilled a number of holes into the target with the significant results and WAMEX Id reported in this body of the release
<i>Geology</i>	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The tenements are located within the Oakover Basin, the edges of which are defined by the Neoarchaeal 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 goethite and limonite.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> 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"> 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. 	<ul style="list-style-type: none"> All rock chip location data is presented in the text
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No data aggregation has been undertaken on single point samples

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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'). 	<ul style="list-style-type: none"> No drill widths or intervals reported
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> See body of the release for geology and tabulation of surface sample assays
Balanced reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Information considered material to the reader's understanding of the leaching has been reported in the body of the text
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Further work is planned that includes: detailed site inspections, Heritage surveys and RC or AC drilling of the priority targets. Hydrometallurgical test work is also being undertaken on samples gathered from the outlined prospects.