



**MOZAMBI**  
R E S O U R C E S

## **ASX ANNOUNCEMENT**

By e-lodgement

8 March 2016

# **Exceptional Super Jumbo and Jumbo Flake Graphite Metallurgical Results Continue**

## **Highlights:**

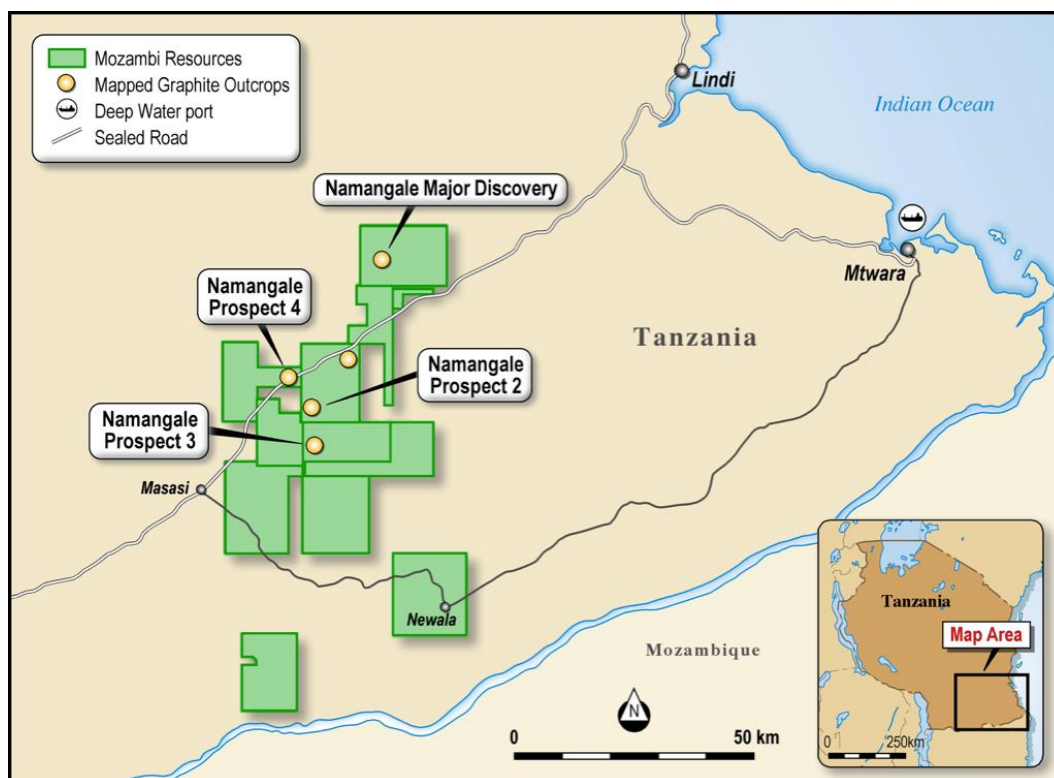
- **New metallurgical results across all Namangale deposits show consistent outstanding Super Jumbo and Jumbo Flake size graphite**
- **Outstanding distribution of up to 94.5% confirmed in high value categories of Super Jumbo +600 microns, Jumbo +300 microns and Large + 180 microns flake graphite**
- **New Results received from SGS Laboratories South Africa on 6 Diamond core composites further validates the consistency of graphite flake size and adds greatly to previously received metallurgical results**
- **Metallurgical results are confirming easy separation of graphite flake from the host rock following a simple crushing and process, with no chemical liberation required**
- **Multi-element assays of graphite mineralisation has also shown low levels of potentially deleterious trace elements**
- **Flotation test work is currently underway from representative materials from all three deposits in order to produce a graphite concentrate at ALS in Perth.**
- **Strong demand is continuing for Super Jumbo and Jumbo flake graphite from end user companies in the Lithium – Ion battery market**
- **Positive discussions are continuing with potential end-user groups**

## **Introduction**

Mozambi Resources Limited (ASX: MOZ, “Mozambi”, “the Company”) is pleased to announce further exceptional metallurgical results noting Super Jumbo and Jumbo Flake mineralisation at Namangale 1, 2 and 3. The results from the 6 diamond core composites add to the 3 diamond core composites previously announced and highlight outstanding size distribution, with up to 94.5% of the graphite in the categories of Super Jumbo, Jumbo and Large Flake graphite. Flotation test-work is currently underway at ALS in Perth on representative diamond core samples of both fresh and oxidised mineralisation. Results to determine graphite concentrate grade, yield and flake size distribution post floatation, will be reported as soon as they are available.

Mozambi Executive Chairman, Stephen Hunt comments that these flake size results are truly exceptional. The fact that the Super Jumbo and Jumbo results are consistent over all composites, presents Mozambi with the foundations of a superior asset. We continue to see ever growing demand for Super Jumbo and Jumbo flake sizes and this is borne out in the significant price premium these products command. Coupled with the fact that the flakes are liberating easily, gives us great confidence that we are very well placed to capitalise on the Namangale asset.

**Figure 1** below shows the location of the Namangale Project tenements and the main graphite prospects that have been identified to date. These lay within the 2,000km<sup>2</sup> of the Company’s tenement package. Mozambi has continued to build on its dominant tenement position in this extremely well located, high quality graphite area of Tanzania.



### Namangale Flake Size Distribution Results

Flake size distribution results from 9 diamond core composites from 6 drill holes at the Namangale 1, 2 and 3 deposits have returned exceptional flake size results with up to 57.9% Super Jumbo Flake (i.e. size of larger than 600µm), with low proportions of fine and amorphous graphite from all composites. Assay results from Namangale 2 returned 94.5% of graphite in the Super Jumbo, Jumbo and Large Flakes sizes with all other samples returning highly encouraging results. These results are in addition to the flake size distribution results released to the ASX on the 11<sup>th</sup> of January

### Table 1 Graphite Flake Size Distributions Namangale

[illegible]

## Results Summary

The results of the flake size distribution of the diamond core composites confirm the coarse flake nature of the mineralisation identified in the Optical Microscopy carried out by ALS Metallurgy based in Perth Western Australia. Results of Optical Mineralogy examination of samples from Namangale 1, 2 and 3 previously reported show large flakes are present at all three deposits and individual flakes were mostly liberated by crushing to between 0.5-1.0mm. Graphite flakes in the 1mm to 0.5mm size frequently contained large graphite flakes up to 1000 microns in size. These results were produced with no chemical processing and indicate mineralisation from this area has the potential to achieve excellent levels of graphite concentration using a low cost flotation separation without crushing to fine particle sizes or using chemical treatments. The proportion of larger flake sizes will reduce with further processing required to make a graphite concentrate. Multi element analysis of graphite mineralisation has also shown low levels of trace elements, which therefore creates a clean graphite product.

## 2016 Exploration Program

Preparations for the 2016 field season are now well advanced with activities planned to commence by mid-March. The objective of the 2016 exploration program is to upgrade a significant portion of the Inferred JORC Resource at Namangale to the Indicated and Measured Resource categories to allow the calculation of Mineral Reserves, following the completion of a PFS. The 2016 Drilling program will also include sterilisation drilling under proposed waste dump and tails dam locations, geo-tech diamond drill holes and the constructing water bores, as the Company looks to fast track the Namangale Project towards production.

## Existing Infrastructure

Mozambi Resources enjoys **excellent infrastructure, with the deep-water Mtwara Port only 140km from the Namangale Prospect. Power and sealed roads are available 10km from the deposit location.** The existing sealed road connects all the way to port. **Figure 2** shows the port, which has existing present capacity of 400,000 metric tonnes per annum and could handle up to 750,000 metric tonnes per annum with the same number of berths if additional equipment is put in place for handling containerised traffic<sup>i</sup>. The port is currently heavily underutilised, with only approximately 34% of its existing capacity being utilised<sup>ii</sup>.



**Figure 2** shows the deep-water Mtwara Port

## Corporate

Discussions are ongoing with a number of potential end user groups as Mozambi works towards marketing our graphite products for potential offtake agreements. Strong demand is continuing for Super Jumbo and Jumbo flake graphite from end user companies in the Lithium – Ion battery markets. The Company is also in the final stages of discussions with potential PFS consulting firms, with an announcement anticipated in the near future.

## Conclusion

The Board of Mozambi Resources considers the results to date continue to indicate that the Namangale Prospect is rapidly emerging as a world-class graphite deposit. Preparations to begin the 2016 drilling season are now well advanced to update a significant portion of the Inferred Resource into Indicated and Measured categories. Mozambi is totally committed to fast tracking towards production and meeting the unprecedented market demand for Super Jumbo and Jumbo flake graphite.

For and on behalf of Mozambi Resources Limited



**Alan Armstrong**  
**Mozambi Resources Ltd**  
Managing Director

## Competent Person

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Matt Bull, a Competent Person who is a member of Australian Institute of Geoscientists. Mr Bull is a Director of Mozambi Resources. Mr Bull has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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'. Matt Bull consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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<sup>i</sup> [http://www.tanzaniaports.com/index.php?option=com\\_content&view=article&id=131&Itemid=290](http://www.tanzaniaports.com/index.php?option=com_content&view=article&id=131&Itemid=290)

<sup>ii</sup> <http://allafrica.com/stories/201407211545.html>

# JORC Code, 2012 Edition – Table 1 – Namangale Project

## 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"> <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>Sampling was carried out by cutting HQ diamond core into quarters with composites selected based on lithology intervals as logged by a suitably qualified geologist.</li> <li>Intervals up to a maximum width of 20m were taken.</li> <li>These composites were then crushed to 1mm and then split into the respective size fractions and then assayed for TGC to obtain the respective graphite proportion in each size fraction.</li> </ul>
Drilling techniques	<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>Diamond Drilling was conducted by JCIL drill using HQ core diameter triple tube (63mm).</li> </ul>
Drill sample recovery	<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>Diamond drill recovery was excellent (&gt;90%) and is therefore not expected to influence grade.</li> </ul>
Logging	<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</li> </ul>	<ul style="list-style-type: none"> <li>Logging was carried out on each of the diamond holes including lithology, amount of weathering by a suitably qualified geologist prior to selecting intervals to be sampled.</li> <li>Data is initially conducted on paper logging sheets and is then transferred to Excel logging sheets.</li> </ul>

	<ul style="list-style-type: none"> <li>• <i>costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Logging is semi-quantitative based on visual estimation.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Quarter core was used in the composites</li> <li>• Quarter core was also sampled for TGC were QC measures also include blank samples and certified standards both of which are inserted at a ratio of 1:20. SGS also has its own internal QA/QC controls to ensure assay quality.</li> <li>• All sampling was carefully supervised with ticket books containing pre-numbered tickets placed in the sample bag and double checked against the ticket stubs and field sample sheets to guard against mix ups.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Blanks, duplicated and certified standards were inserted by the company at a ratio of 1:20.</li> <li>• The samples were sent to Mwanza in Tanzania for sample preparation before being sent to South Africa for separation into the respective size fraction before analysis for Total Graphitic Carbon (TGC) using the method GRAP_CSA05V LECO Total Carbon.</li> <li>• The TGC analysis has been carried out by an industry accepted and recognized laboratory – SGS</li> <li>• TGC is the most appropriate method of Analysis for graphitic carbon.</li> <li>• SGS inserted its own standards and blanks.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Data was recorded by the sampling geologist and stored in the company's master spreadsheet. The samples are transported to the SGS Lab in Mwanza for initial preparation before SGS transported for Assay at their lab in Johannesburg, South Africa.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A hand-held GPS was used to identify the position of all samples (X and Y horizontal error of 5 metres) and reported using ARC 1960 grid and UTM datum Zone 37 south. During December 2015 a DGPS survey was conducted which considerably improved the accuracy of the collar locations, especially the Height Datum of the drill-hole ground collar. Positional accuracy is given as &lt;1.5m error in X and Y.</li> </ul>

<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were taken to test the metallurgical properties of material from twinned RC holes that were considered to be representative of material within the deposits.</li> <li>• Yes compositing according to material type was carried out</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Surface mapping and interpretation of ground EM data was used to orient the drill lines to get the most unbiased sampling of the mineralisation.</li> <li>• Drilling was planned to intersect the mineralization as close as possible to right angles. Results indicate the drill holes intersect the mineralisation at between 70-90 degrees.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Transportation is carried out by company staff driving the samples to the preparation Lab in Mwanza directly from site.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews have yet been under taken</li> </ul>



## 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"> <li><i>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.</i></li> <li><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>The prospecting license PL10644 containing the Namangale 2 deposit was granted on the 9th of July 2015 for a period of four years for the exploration of Graphite. The area covered by the prospecting licenses is 198.02km<sup>2</sup>. PL10644 License is situated in the Ruangwa and Masasi districts. The PL's straddle the boundary of the Lindi and Mtwara regions of south-east Tanzania. The prospecting license PL10718 containing the Namangale 1 Prospect was granted on the 18th of July 2015 for a period of four years for the exploration of Graphite. The area covered by the prospecting license is 239.17km<sup>2</sup>. The License is situated in the Ruangwa District. The License is located within the Lindi region of south-east Tanzania. While the prospecting license PL10717 containing the Namangale 3 Prospect was granted on the 18th of September 2015 for a period of four years for the exploration of graphite. The area covered by the prospecting license is located within the Mtwara region of south east Tanzania. The area covered by this prospecting license is 142.84km<sup>2</sup>.</li> <li>The PL's are held by Nachi Resources Ltd, which in turn is 100% owned by Mozambi Resources. The surface area is administered by the Government as native title. The area is rural, with wilderness areas and subsistence farming occurring on the PL's. The Tenements are subject to a 3% royalty on production to the previous owners of Nachi Resources, which can be reduced to 1.5% under an agreement with the previous owner. There are no other known issues that may affect the tenure.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>There is no written record of previous exploration available for this area that is known to Mozambi Resources. The location of some graphite outcrops on the PL's was known by the previous owners.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The exploration targets occur in Proterozoic basement rocks of the Mozambique belt system which principally comprise metamorphic rocks ranging from schist to gneisses including marbles, amphibolite, graphitic schist, mica and kyanite schist, acid gneisses, hornblende, biotite and garnet gneisses, quartzite, granulite, and pegmatite veins. Initial exploration has focused on areas where there no or minimal overlying younger sedimentary sequences remaining (mostly</li> </ul>



		Cretaceous sandstones and conglomerates).
<i>Drill hole Information</i>	<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>• The location of the composites has previously been reported in previous maps showing that the holes are wide spaced across the 3 deposits.</li> </ul>
<i>Data aggregation methods</i>	<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> <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>• Intervals were selected based on geological logging mineralized lithology, where the interval contained lower grades zones this was not removed but incorporated into the interval.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<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>• Drill lines are planned to be as close as possible to right angles to the mapped mineralization.</li> <li>• The width of mineralization ranges from close to 100% of the intercepts to approximately 85% of the interval as the mineralization is gently folded. Closer spaced drilling is required to find the exact relationship.</li> </ul>
<i>Diagrams</i>	<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>• N/A</li> </ul>
<i>Balanced reporting</i>	<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>• All Results are reported</li> </ul>
<i>Other substantive</i>	<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</li> </ul>	<ul style="list-style-type: none"> <li>• Previous results from Namangale 1, 2 and 3 include Ground EM surveys, mapping, trenching, rock chip sampling all of the results of</li> </ul>

<i>exploration data</i>	<i>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.</i>	this work were previously reported. Recent ASX announcements also includes a simplified geological map of the area showing all significant intercepts.
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Further work is planned to include further drilling, mapping and trenching. Floatation test work at ALS in Perth is currently underway to determine the recovery, purity and flake size distribution on graphite from the composites of the various material types from all three deposits.</li> </ul>