

**ASX Announcement** 

30 October 2014

# Discovery Africa secures additional Prospecting Licence at Nachingwea Graphite Project, Tanzania

## **HIGHLIGHTS**

- Grant of Prospecting Licence PL10253/2014 covering 103km<sup>2</sup> of prospective terrain;
- Discovery Africa has a dominant tenement position at Nachingwea located between and adjacent graphite projects held by Syrah, Magnis (formerly Uranex) and IMX Resources;
- The project area has excellent infrastructure with access locally to electricity, water, sealed roads and within 180km of Mtwara's containerised port facility.

Emerging graphite explorer Discovery Africa Limited (ASX: DAF - "Discovery Africa") is pleased to announce that it has enhanced its Nachingwea Graphite Project after being notified that an additional Prospecting Licence (PL10253/2014) has recently been granted and valid for a period of four years, resulting in an extra 103km<sup>2</sup> of prospective terrain to its tenement portfolio in Tanzania.

The Nachingwea Graphite Project is located in southeast Tanzania and comprises five granted tenements covering approximately 520km<sup>2</sup> (Figure 1). The region has access to high quality infrastructure including access via mainly sealed roads from the coastal towns of Lindi and Mtwara, which also boast an airport and deepwater port facilities.

The Project substantially overlays the graphite prospective Mozambique Mobile Belt, with graphitic schist located both within and surrounding the Project. The prospect areas within the project tenements are highly prospective for graphite mineralisation, including outcrops of graphitic schist identified at numerous localities. At the Injaa Hill prospect area, outcrops of graphitic schist have been mapped by the Geological Survey of Tanzania.

As part of the Company's recently announced Total Graphite Carbon (TGC) assay results from its maiden trenching program across three areas targeting outcropping graphitic zones within two other licences at the Project, the Company collected two rock samples within the recently granted licence with TGC assay results indicating grades of 7.22% and 5.55%.

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Sample #	East_UTM	North_UTM	RL	Datum	Sample Type	TGC%
TZGR030	484015	8862939	532	ARC1960 Z 37	Grab rockchip	5.55
TZGR031	483966	8862937	533	ARC1960 Z 37	Grab rockchip	7.22





The grant of this additional Prospecting Licence allows the Company to plan systematic exploration works across the entire project area with the aim of defining high grade graphite mineralization and further understand the potential quality of the overall project. In addition, DAF has access to an in-country technical and logistics field team that is available to assist the Company advance the project.

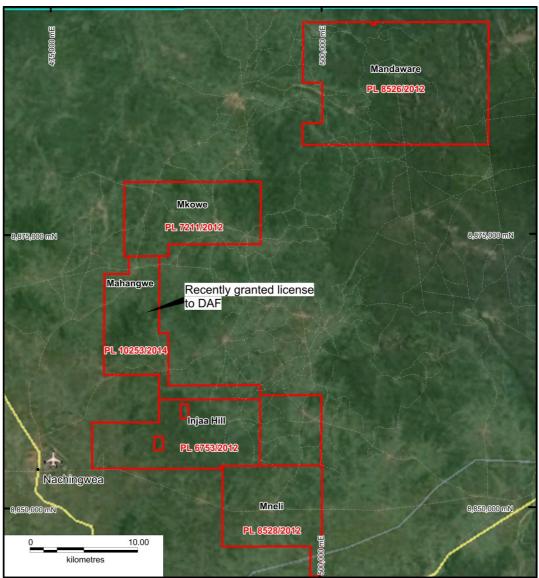


Figure 1. Tenement Location Map showing newly granted Prospecting Licence 10253/2014

The Board of Discovery Africa is extremely pleased to have the fifth tenement granted at its Nachingwea Project, which will allow a consolidated approach to exploration of the entire project area and cements DAF's position as an emerging graphite explorer in Tanzania.

### ENDS





### For further information:

Frank Knezovic, Chairman Peter Lloyd, Director

T | +61 8 9226 4500

E | <u>frank@discoveryafrica.com.au</u>

E | peter@discoveryafrica.com.au

W www.discoveryafrica.com.au

#### Competent Person's Statement

The details contained in the document that pertains to exploration results, ore and mineralisation is based upon information compiled by Mr Jerko Zuvela. Mr Zuvela is a Member of the Australasian Institute of Mining and Metallurgy (Chartered Professional) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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" (JORC Code). Mr Zuvela is a Consultant to Discovery Africa Limited and has consented to the inclusion in the report of the matters based on the information in the form and context in which it appears.

#### JORC Code, 2012 Edition, Table 1 Report

The Table 1 Report detailing "Sampling Techniques and Data" and "Reporting of Exploration Results" in accordance with 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code) is shown below.



# JORC Code, 2012 Edition – Table 1 report

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>Rock chip samples taken from outcrop or from surface float thought to be derived from shallow buried cover within a 15m radius</li> <li>Surface rockchip samples range between 0.5kg and 2.5kg in weight</li> <li>The Company has taken all care to ensure no material containing additional carbon has contaminated the samples</li> <li>All samples are individually labelled and logged</li> </ul>
Drilling techniques	<ul> <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> <li>Not applicable, DAF has not completed any drilling on the property</li> </ul>
Drill sample recovery	<ul> <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> <li>Not applicable, DAF has not completed any drilling on the property</li> </ul>
Logging	<ul> <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> </ul>	<ul> <li>Surface rockchip samples were described in basic terms – lithology, degree of weathering, flake size and an estimate of grade</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	The surface rockchip samples have not undergone any field splitting or composition
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The samples were sent to Mwanza in Tanzania for preparation and pulps were then sent to South Africa for TGC analysis for Total Graphitic Carbon (TGC) GRAP_CSA05V LECO Total Carbon.</li> <li>The TGC analysis has been carried out by an industry accepted and recognised commercial laboratory - SGS</li> <li>TGC is the most appropriate method to analyse for graphitic carbon and it is total analysis</li> <li>SGS inserted its own standards and blanks and completed its own QAQC for each batch of samples</li> <li>Certified standard material was inserted at a rate of 5%</li> <li>Field duplicates were inserted at a rate of 5%</li> <li>No blanks were inserted by the Company</li> <li>DAF is satisfied the TGC results are accurate and precise and suitable for use in this Release</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>The data has been manually updated into a master spreadsheet which is appropriate for this early stage in the exploration program</li> </ul>
Location of	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations</li> </ul>	<ul> <li>A handheld GPS was used to identify the positions of the rockchip samples</li> </ul>

Criteria	JORC Code explanation	Commentary
data points	used in Mineral Resource estimation. <ul> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The handheld Garmin GPS has an accuracy of +/- 5m</li> <li>The datum is used is ARC 1960 UTM zone 37</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>No sample compositing has been applied.</li> <li>Data spacing for two rockchip samples is approximately 100m and at this early stage grade or geological continuity cannot be proven</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The representivity of the surface rockchip samples cannot be assessed given the lack of continuous outcrop in these areas. These samples are only indicative results of the local geology and no claim to the volume or extent of this sample material is made</li> <li>Additional sampling and mapping is required to fully understand the mineralization and its grades in relation to controlling structures</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>The rockchip samples were taken under the supervision of an experienced geologist employed as a consultant to DAF</li> <li>The samples were transferred under DAF supervision from site to the local town of Nachingwea</li> <li>The samples were then transported from Nachingwea to Dar es Salaam and then transported to Mwanza where they were inspected and then delivered directly to SGS process facility.</li> <li>Chain of custody protocols were observed to ensure the samples were not tampered with post sampling and until delivery to the laboratory for preparation and analysis</li> <li>Transport of the pulps from Tanzania to South Africa was completed under the supervision of SGS</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	Not applicable, DAF has not completed any drilling on the property

## **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	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint</li> </ul>	<ul> <li>The rockchip sampling was undertaken on Prospecting License PL10253/2014, having a total area of 103.53km<sup>2</sup></li> </ul>

Criteria	JORC Code explanation	Commentary
land tenure status	<ul> <li>ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The company has 100% ownership of the licenses through a Tanzanian subsidiary – Hatua Resources</li> <li>Subsistent landowners of the affected villages were supportive of the recently completed sampling and exploration program</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>There are some historic government records of geologists evaluating the area for graphite in the 1960's but no other modern exploration has been undertaken over the DAF tenements</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The deposit type is described as schist and quartzite hosted flaky graphite</li> <li>The mineralisation is hosted within upper amphibolite facies gneiss of the Mozambique Mobile Belt</li> <li>Over 95% of the exposures within the tenement comprise 3 main rock types that include alternating sequences of: <ul> <li>Graphitic schist – feldspar and quartz rich varieties</li> <li>Marble and</li> <li>Quartzite</li> </ul> </li> <li>The area is also partially overlain with Tertiary sediments of unknown thickness</li> </ul>
Drill hole Information	<ul> <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> <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> <li>Not applicable, DAF has not completed any drilling on the property</li> </ul>
Data aggregation methods	<ul> <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</li> </ul>	<ul> <li>No data aggregation has been undertaken on the rockchip samples</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>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>	
Relationship between mineralisation widths and intercept lengths	<ul> <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> <li>The rockchip samples do not provide an indication as the geometry of the graphite mineralization and further widespread surface sampling and mapping is required</li> </ul>
Diagrams	<ul> <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>	Not applicable
Balanced reporting	<ul> <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> <li>All rock chip samples have been reported in this release</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>No further information has been compiled to date</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further surface sampling techniques that may include pitting and trenching with mapping</li> <li>Initial metallurgical testwork – flotation and particle sizing</li> <li>Surface or aerial EM</li> <li>Data compilation, analysis and ranking prior to drilling</li> </ul>