

## Testwork Demonstrates Superior Graphite Quality

**Kibaran Resources Limited** (ASX:KNL), ('Kibaran' or the 'Company') is pleased to provide the results of recent testwork to determine the suitability of Kibaran's Epanko Graphite Project's graphite for the production of Expandable Graphite Salt ('Expandable Graphite'), also referred to as Graphite Intercalation Compound ('GIC'). The testwork was undertaken by an independent, specialized German graphite laboratory and standard test parameters were applied.

The testwork is being run in parallel to the Bankable Feasibility Study process design testwork to support further graphite sales to the Company's existing graphite offtake and sales partners. The testwork was undertaken on two samples that represent the initial natural flake graphite concentrate produced from the Eastern and Western mineralized zones of the Epanko deposit.

### EXPANSION RATES

Both samples were processed by conventional flotation and the resulting concentrates were divided into four different screen fractions, being jumbo to medium flake size (+32, +50, +80 and +150 mesh). Each size fraction was tested separately.

The testwork utilised potassium permanganate ( $\text{KMnO}_4$ ) as the oxidizer and sulphuric Acid ( $\text{H}_2\text{SO}_4$ ), both of which are commonly used for the commercial production of GIC on an industrial scale. Results are measured as the expansion volume after heat treatment of the expandable graphite with greater volumes per unit of mass being the objective. The results for the commercially important fractions for the two samples are:

- Jumbo (+50 mesh) 490 ml/g and 420 ml/g.
- Large (+80 mesh) 380 ml/g and 310 ml/g.

These results are superior to those achieved from graphite produced in China which is currently the dominant supplier of expandable graphite to the world market. Typical expansion volumes for quality grades of expandable graphite from China are 370 ml/g for +50 mesh material and 280 ml/g for +80 mesh material, measured under similar test conditions to those applied to Epanko graphite samples.

Expansion rates are linked to the flake size, hence Jumbo (+50 mesh) and Large (+80 mesh) are desired fractions with increase in volume the most important measurement.

### QUALITY AND PURITY

The superior quality of Epanko's graphite also extends to other properties including a higher ash melting point of 1,305°C and ultra-high purity (99.98% C). Graphite produced in China and used in refractory applications has an ash melting point between 1,150–1,250°C (refer announcement 5<sup>th</sup> November 2014).

The outstanding quality characteristics of Epanko's graphite provides significant competitive advantage and paves the way for it to be used in a wide range of applications, from the basic uses such as refractories to the sophisticated applications of anode grade graphite for Lithium-Ion-Batteries and expandable graphite for graphite foil production.

The future growth in demand for expanded graphite is considered significant given its electrical and thermal conductive properties for use in applications such as building products, fire retardants and military applications.

Managing Director Andrew Spinks commented, "The results confirm once again that the graphite from the Epanko Graphite Project is of superior quality and suitable for all downstream graphite uses, including the production of expandable graphite. Kibaran's graphite will provide an alternative long-term term stable supply of superior quality graphite to the current supply sourced from China."



The metallurgical testwork samples were selected from the 7 diamond holes drilled as part of the BFS diamond drilling programme (refer announcement dated 30 September 2015). Samples are centred at E904301/ N9035298 and N9035689/E905038

**For further information on Kibaran, please visit our website [www.kibaranresources.com](http://www.kibaranresources.com) or contact:**

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The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Andrew Spinks, who is a Member of The Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. Andrew Spinks is a director of Kibaran Resources Limited 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". Andrew Spinks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr David Williams, who is a Member of The Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. David Williams is employed by CSA Global Pty Ltd 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". David Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.