Armadale Capital, the investment company focused on natural resource projects in Africa, continues to advance its 100% owned Mahenge Liandu graphite project in Tanzania. Mahenge Liandu is in an area of proven coarse flake, high-grade graphite resources and has a maiden Inferred resource estimate (JORC-2012 compliant) of 40.9Mt grading 9.41% total graphite content (TGC). Of this, at least 32Mt grades 10.47% TGC making Mahenge Liandu one of the highest-grade graphite deposits in Tanzania.

Armadale’s strategy is to build a portfolio of valuable resource projects with near-term revenue generation. With increased demand for graphite expected to be driven by the anticipated growth in lithium-ion batteries, we expect Armadale to capitalise on this demand moving forward. We maintain a Speculative Buy rating on the stock and have a target price of 4.4p per share.

Maiden JORC-compliant mineral resource estimate

Mahenge Liandu is characterised by wide zones of graphitic schist up to 500m and >2km strike length. Armadale has recently completed a successful drill campaign where 18 of 21 drill holes intersected high-grade coarse flake graphite mineralisation. Based on these results, a maiden JORC-compliant resource (Inferred) returned 40.9Mt grading 9.41% total graphite content (TGC).

Graphite demand set to expand

The key graphite end uses are anodes in lithium-ion batteries (a high growth market), high-quality lubricants, high-voltage capacitors, photovoltaic cells and numerous other products. Global demand for commercial graphite is expected to increase, fuelled by increasing production of electric vehicles, smart phones and developments in the energy storage industry.

JV to develop and operate Mpokoto gold project

On 28 September 2016, Armadale entered into a binding Heads of Agreement (HoA) with Kisenge Mining (KMP), formerly African Mining Services (AMS), to develop the Mpokoto gold project in the DRC. Having recently completed its due diligence, KMP has decided to exercise its option and form a JV. Should KMP complete its earn-in obligations (see RNS 28 Sept. 2016) and bring Mpokoto into commercial production Armadale will maintain at least a 15% interest. The Mpokoto project comprises four mining licences and has a combined mineral resource estimate of 678,000oz grading 1.45g/t Au.

Relative valuation

With our Tanzania graphite peer group trading at an average EV/t (contained graphite) of US$9.4/t, we calculate a risk-adjusted equity value of US$13.1m (or 4.4p per share) for Armadale’s Mahenge Liandu project.
Mahenge graphite project

On 2 June 2016, Armadale signed an agreement to acquire the Mahenge Liandu graphite project located in the Ulanga District in south east Tanzania from Graphite Advancement Tanzania (GAT). The announced share purchase agreement acquired 100% of the issue share capital of GAT for total consideration of 57.5M ordinary shares of Armadale and £450,000 of unsecured convertible loan notes.

The highly prospective Liandu project is located in an area of proven coarse flake, high-grade graphite resources as demonstrated by operators whose projects are contiguous with Mahenge Liandu (i.e. Kibaran Resources and Black Rock Mining). Armadale’s two tenements cover an area of 29.9km$^2$ with previous drill campaigns confirming high-grade mineralisation from surface intersecting 60m grading 10.7% TGC, including 24m grading 12.9% TGC and 5m grading 21.5% TGC.

Mahenge Liandu graphite location

Source: Company report.

Geology

Graphite mineralisation at Mahenge Liandu is characterised by schist-hosted flaky graphite within a sedimentary package that has been subject to upper amphibolite-grade metamorphism. The high-grade metamorphic grade is likely responsible for the low impurities such as vanadium. Mineralisation occurs within one continuous ore body, near surface which implies a low strip ratio.

Maiden JORC-compliant mineral resource estimate

On December 8 2016, Armadale released its maiden JORC (2012) compliant Inferred mineral resource estimate of 40.9Mt grading 9.41% TGC for its 100% owned Mahenge Liandu graphite. Of note, 32Mt of this resource has an average grade of 10.47% TGC, representing one of the highest-grade resources in Tanzania.
Metallurgical testwork

ACP announced results of the first round of metallurgical testwork from a 10kg bulk sample. This sample produced high concentrate grades of 99.1% TGC for large size fraction. Furthermore, distribution of flake size reported 61% within the super jumbo, jumbo and large flake categories. The following table illustrates the excellent flake size distribution with 28.1% in the jumbo and super jumbo categories. Further testwork is required to demonstrate the potential for commercial grade graphite concentrates suitable for use in the production of spherical and expandable graphite.

<table>
<thead>
<tr>
<th>Flake</th>
<th>Microns</th>
<th>Mesh size</th>
<th>Weight %</th>
<th>Grade TGC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super jumbo</td>
<td>&gt;500</td>
<td>&gt;35</td>
<td>3.7</td>
<td>98.4</td>
</tr>
<tr>
<td>Jumbo</td>
<td>300 - 500</td>
<td>&gt;50</td>
<td>24.4</td>
<td>98.5</td>
</tr>
<tr>
<td>Large</td>
<td>180 - 300</td>
<td>&gt;80</td>
<td>32.9</td>
<td>99.1</td>
</tr>
<tr>
<td>Medium</td>
<td>150 - 180</td>
<td>&gt;100</td>
<td>11.7</td>
<td>98.9</td>
</tr>
<tr>
<td>Small</td>
<td>75 - 150</td>
<td>&gt;200</td>
<td>11.9</td>
<td>98.7</td>
</tr>
<tr>
<td>Fine</td>
<td>&lt;75</td>
<td>&lt;200</td>
<td>15.4</td>
<td>88.4 - 98.7</td>
</tr>
</tbody>
</table>

Source: Company data.

Valuation

When considering our Tanzania graphite explorers/developers peer group, we note that Armadale has underperformed its peers.

Armadale share price (GBP) versus peers (rebased)

![Armadale share price graph]

Source: Bloomberg, Beaufort Securities. As at 17/02/2017.
**Tanzania graphite peer comparison**

<table>
<thead>
<tr>
<th>Company</th>
<th>Project</th>
<th>Stage</th>
<th>Market Cap USDm</th>
<th>Cash USDm</th>
<th>EV Resource USDm</th>
<th>Resource Mt</th>
<th>Grade % TGC</th>
<th>Contained graphite Mt</th>
<th>Applied multiple US$/t</th>
<th>less net debt/(cash) US$m</th>
<th>Implied equity US$m</th>
<th>risked-adjusted value 65%</th>
<th>Number of shares M</th>
<th>Value of shares US$</th>
<th>Value of shares GBp</th>
<th>Current value GBp</th>
<th>upside %</th>
<th>risked-adjusted value 65%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphex</td>
<td>Chilalo</td>
<td>PFS</td>
<td>19.1</td>
<td>3.8</td>
<td>15.3</td>
<td>25.1</td>
<td>6.0</td>
<td>1.5</td>
<td>10.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnis Resource</td>
<td>Nachu</td>
<td>BFS</td>
<td>241.8</td>
<td>5.4</td>
<td>236.5</td>
<td>174.0</td>
<td>5.4</td>
<td>9.4</td>
<td>25.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volt Resources</td>
<td>Nachingwea</td>
<td>PFS</td>
<td>30.7</td>
<td>5.7</td>
<td>25.0</td>
<td>446.2</td>
<td>5.0</td>
<td>22.4</td>
<td>1.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Rock Mining</td>
<td>Mahenge</td>
<td>Scoping</td>
<td>31.8</td>
<td>1.8</td>
<td>30.0</td>
<td>162.5</td>
<td>7.8</td>
<td>12.7</td>
<td>2.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kibaran Resources</td>
<td>Epanko/ Merelani</td>
<td>BFS</td>
<td>28.8</td>
<td>1.5</td>
<td>27.3</td>
<td>40.2</td>
<td>8.2</td>
<td>3.3</td>
<td>8.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>average</strong></td>
<td>Mahenge Liandu</td>
<td>Scoping</td>
<td>7.8</td>
<td>1.2</td>
<td>6.6</td>
<td>40.9</td>
<td>9.4</td>
<td>3.8</td>
<td><strong>9.4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Company data, Bloomberg as at 17/02/2017.

Given the early stage exploration and lack of detailed feasibility studies on Mahenge Liandu, we apply a relative valuation approach. We have compiled a peer group of Tanzanian graphite explorers/developers and derived a EV/resource multiple which we then apply to Armadale’s resources. The average EV/total contained graphite is US$9.4/t. Secondly, we have applied a 65% haircut to our implied equity value to account for risks associated with execution, further dilution, uncertainty with future equity financing and off-take agreements. Our risk-adjusted equity value is US$13.1M or 4.4p per share. At this stage, we haven’t attributed any value for Armadale’s share of the Mkopo gold project while the project continues with development through the JV agreement.

### Armadale base-case valuation

<table>
<thead>
<tr>
<th>Contained graphite Mt</th>
<th>Applied multiple US$/t</th>
<th>less net debt/(cash) US$m</th>
<th>Implied equity US$m</th>
<th>risked-adjusted value 65%</th>
<th>Number of shares M</th>
<th>Value of shares US$</th>
<th>Value of shares GBp</th>
<th>Current value GBp</th>
<th>upside %</th>
<th>risked-adjusted value 65%</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8</td>
<td>9.4</td>
<td>-1.2</td>
<td>37.4</td>
<td>13.1</td>
<td>238.3</td>
<td>0.1</td>
<td>4.4</td>
<td>2.6</td>
<td>68.9</td>
<td></td>
</tr>
</tbody>
</table>

### Mining and infrastructure in Tanzania

Tanzania is a politically stable country that uses the British Common Law System and is supportive of a well-established mining industry. Internationally, Tanzania rates 67 out of 107 for mining investment attractiveness, according to the 2015 Fraser Institute survey. In terms of infrastructure, the Mahenge Liandu graphite project is located 76km from the Tanzania-Zambia railway line to Dar es Salaam port, a major port for East and Central Africa.

### Summary

Armadale offers investors exposure to the expanding global graphite market. With the demand for battery-grade spherical graphite set to grow significantly, we expect Armadale’s stock to perform well as the company continues to de-risk its Mahenge Liandu graphite project through continued metallurgical test-work and potential off-take agreements for its high-quality and high-grade graphitic ore.
Recommendations

During the three months to end-January 2017, the number of stocks on which Beaufort Securities has published recommendations was 314, and the recommendations were as follows: Buy - 81; Speculative Buy - 119; Hold - 29; Sell - 3.

Full definitions of the recommendations used by Beaufort Securities in its publications and their respective meanings can be found on our website here.

This report is published by Beaufort Securities ("Beaufort Securities"). Beaufort Securities is Authorised and Regulated by the Financial Conduct Authority and is a Member of the London Stock Exchange.

This research is non-independent and is classified as a Marketing Communication under FCA rules. As such it has not been prepared in accordance with legal requirements designed to promote independence of investment research and it is not subject to the prohibition on dealing ahead of the dissemination of investment research in COBS 12.2.5. However Beaufort Securities has adopted internal procedures which prohibit analysts from dealing ahead of non-independent research, except for legitimate market making and fulfilling clients' unsolicited orders.

RELIANCE ON THIS NOTE FOR THE PURPOSE OF ENGAGING IN ANY INVESTMENT ACTIVITY MAY EXPOSE AN INDIVIDUAL TO A SIGNIFICANT RISK OF LOSING ALL OF THE FUNDS, PROPERTY OR OTHER ASSETS INVESTED OR OF INCURRING ADDITIONAL LIABILITY.

By receiving this document, you will not be deemed a client or provided with the protections afforded to clients of Beaufort Securities. When distributing this document, Beaufort Securities is not acting for any recipient of this document and will not be responsible for providing advice to any recipient in relation to this document. Accordingly, Beaufort Securities will not be responsible to any recipient for providing the protections afforded to its clients.

Beaufort Securities may effect transactions in shares mentioned herein and may take proprietary trading positions in those shares, and may receive remuneration for the publication of its research and for other services. Beaufort Securities may be a shareholder in any of the companies mentioned in this report. Accordingly, this document may not be considered as objective or impartial. Additionally, information may be available to Beaufort Securities or the Group, which is not reflected in this material. The remuneration of the author of this report is not tied to the recommendations on any shares mentioned nor to the any transactions undertaken by Beaufort Securities or any affiliated company. Further information on Beaufort Securities' policy regarding potential conflicts of interest in the context of investment research and Beaufort Securities' policy on disclosure and conflicts in general are available on request.

Please refer to http://www.beaufortsecurities.com/important-info.

This document is not an offer to buy or sell any security or currency. This document does not provide individually tailored investment advice. It has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. The appropriateness of a particular investment or currency will depend on an investor’s individual circumstances and objectives. The investments and shares referred to in this document may not be suitable for all investors.

Past performance is not a guarantee of future performance. Investments may go down in value as well as up and you may not get back the full amount invested. The listing requirements for securities listed on AIM or ISDX are less demanding and trading in them may be less liquid than main markets.

This document is based on information Beaufort Securities has received from publicly available reports and industry sources. Beaufort Securities may not have verified all of this information with third parties. Neither Beaufort Securities nor its advisors, directors or employees can guarantee the accuracy, reasonableness or completeness of the information received from any sources consulted for this publication, and neither Beaufort Securities nor its advisors, directors or employees accepts any liability whatsoever (in negligence or otherwise) for any loss howsoever arising from any use of this document or its contents or otherwise arising in connection with this document (except in respect of wilful default and to the extent that any such liability cannot be excluded by the applicable law). This document is not to be relied upon and should not be used in substitution for the exercise of independent judgment.

This document includes certain statements, estimates, and projections with respect to the anticipated future performance of securities listed on stock exchanges and as to the market for these shares. Such statements, estimates, and projections are based on information that we consider reliable and may reflect various assumptions made concerning anticipated economic developments, which have not been independently verified and may or may not prove correct. No representation or warranty is made as to the accuracy of such statements, estimates, and projections or as to its fitness for the purpose intended and it should not be relied upon as such. Opinions expressed are our current opinions as of the date appearing on this material only and may change without notice. Other third parties may have issued other reports that are inconsistent with, and reach different conclusions from, the information presented in this report. Those reports reflect the different assumptions, views, and analytical methods of the analysts who prepared them. This report has not been disclosed to any of the companies mentioned herein prior to its publication.

The information contained in this document is confidential and is solely for use of those persons to whom it is addressed and may not be reproduced, further distributed to any other person or published, in whole or in part, for any purpose. Other persons who receive this document should not rely on it. Beaufort Securities, its directors, officers and employees may have positions in the securities mentioned herein.

© Beaufort Securities Ltd
63 St Mary Axe, London EC3A 8AA

Company Name | Disclosure
---|---
Armadale Capital | 1, 2, 7

1. In the past 12 months, Beaufort Securities Limited or its affiliates have had corporate finance mandates or managed or co-managed a public offering of the relevant issuer’s securities or received compensation for Corporate Finance services from the relevant issuer.
2. Beaufort Securities Limited expects to receive or intends to seek compensation for Corporate Finance Services from this company in the next six months.
3. The investment analyst or a member of the investment analyst’s household has a long position in the shares or derivatives of the relevant issuer.
4. The investment analyst or a member of the investment analyst’s household has a short position in the shares or derivatives of the relevant issuer.
5. As of the month end immediately preceding the date of publication of this report or the prior month end if publication is within 10 days following a month end, Beaufort Securities Limited and / or its affiliates beneficially owned 1% or more of any class of common equity securities of the relevant issuer.
6. A senior executive or director of Beaufort Securities Limited or a member of his or her household is an officer, director or advisor, board member of the relevant issuer and / or one of his subsidiaries.
7. Beaufort Securities Limited acts as corporate broker to the relevant issuer.

The investment analyst who is responsible for the preparation of this investment research is employed by Beaufort Securities Limited.