**APP Securities Company Research**

**KBL Mining Limited**

<table>
<thead>
<tr>
<th>KBL</th>
<th>A$0.03</th>
<th>TARGET PRICE</th>
<th>A$0.10</th>
<th>BUY</th>
</tr>
</thead>
</table>

KBL Mining Ltd operates the Mineral Hill copper lead gold mine in NSW, Australia, and holds a 75% interests in the Sorby Hills lead silver project in northern Western Australia.

Johannes Faul, CFA

+61 2 9226 0008

johannes.faul@appsecurities.com.au

Source: FactSet

**Exciting Times Ahead**

APP Securities has visited KBL Mining Limited’s (ASX:KBL) Mineral Hill operations. The upgrade and extension of the plant is in its final stages and production from the Pearse gold deposit is expected in August 2015. Once the plant has been completed, the Mineral Hill operations are capable of producing three separate concentrates (Cu, Pb, Zn) simultaneously as well as gold dore from oxide ore and flotation tailings through the CIL circuit.

The imminent start of gold production from Pearse ore is expected to (1) generate significant free cash flows and (2) also provide the underground sufficient breathing room to prove up mill feed to improve head grades and optimise mill throughput going forward.

We maintain our BUY recommendation and A$0.10ps target price.

- **First gold from Pearse is nigh...** First gold-silver concentrate production is expected in September 2015. First dore production from the CIL plant in November 2015.
- **...accompanied by significant cash flow:** We estimate Pearse open cut to generate some A$31M in cash flow from operations in FY16, based on APP Securities’ forecast gold price of A$1,507/oz.
- **Pearse also gives the U/G breathing room:** During the Pearse open cut production, underground operations are expected to continue with development access to future production sources and exploration. The opening of numerous lodes underground and the delineation of a robust mine plan is expected to improve operational efficiencies and reduce unit costs at Mineral Hill.
- We calculate a valuation for KBL of A$64M or A$0.10ps. A 10% increase across all A$ denominated commodity prices lifts our valuation by 22% to A$78M or A$0.12ps.
- Our A$0.10ps target price is underpinned by our valuation.

**Disclaimer:** APP SECURITIES PTY LTD acted as Lead Manager to the KBL Placement as announced by the ASX on 20 July 2015 for which it received fees.
**Pearse, the Game Changer**

KBL is currently pre-stripping the Pearse gold-silver deposit at Mineral Hill. We estimate gold production from Pearse alone at 41.2koz in FY16, generating operating cash flows of A$30.8M at our forecast gold price of A$1,507/oz. This is net of the impact of lower metal prices received on 24.1% of sales volumes, due to the Quintana funding deal.

**Prioritising High Value Mill Feed**

KBL’s strategy is to supply the mill with ore from the Southern Ore Zone (lenses A, B, D and G) until the Pearse open cut commences delivering higher value gold-silver sulphide ore to the mill.

Pearse is expected to account for the majority of ore feed for the next ten to twelve months and Mineral Hill production is expected to be dominated by gold-silver concentrate.

During this time, KBL plans to continue developing underground access to future production, such as the G and A lodes. The company’s goal is to increase the underground’s profitability by drilling sufficient reserves ahead which is expected to reduce the variability in head grade seen in the past.

---

**First Gold Shipment on Track for September 2015**

The open pit at Pease is well advanced with over 150,000bcm moved as of 30 June 2015, with oxides currently being stockpiled for later processing through the CIL circuit. In total we estimate some 1,200,000bcm or about 3.0Mt of material to be moved over the life of the deposit.

First production from sulphides remains on target for late August 2015. The first shipment of gold concentrates is scheduled for September 2015 and first dore production in November 2015.

The company has appointed local contracting firm MAAS to mine the Pearse open cut. Westech International is building the CIL plant.

---

**Figure 1. Pre Stripping at Pearse Open Pit**

**Figure 2. Eastern Ore Zone Pit with Declines**

**Figure 3. Pearse Optimised Pit Looking North West**
Working Towards Better Understanding of the Underground

Underground development was at a record for KBL, achieving 566 metres in JunQ15 and focussed on opening up reserves.

The increased underground development has opened a substantial proportion of the G lode reserves, expected to be mined in twelve months’ time. Grades in the G lode development are consistent with resource grades.

**Figure 4. Development Metres (monthly)**

![Development Metres (monthly)](source: KBL)

As of June 2015, KBL had developed 90 metres into the G lode with over 110 metres of development outstanding. The G lens is a high grade gold-copper lode and the company intends to commence production here in 12 months, giving it time to develop, drill and delineate a robust mine plan.

Plant Upgrade Nearing Completion

The plant at Mineral Hill is in the final stages of an expansion and upgrade.

Works are now well advanced to modify the process plant to allow for copper, lead and zinc concentrates to be sequentially produced without the need for any particular product stoppages. The lead circuit is complete and the zinc circuit should be commissioned in August 2015.

The next phase is the installation of the zinc thickener and flotation cells which are expected to be completed during the current SepQ15.

**Figure 5. Mineral Mill Plant**

![Mineral Mill Plant](source: APP Securities Pty Ltd)

**Figure 6. Ball Mills**

![Ball Mills](source: APP Securities Pty Ltd)
In parallel, KBL is constructing a CIL circuit for the treatment of Pearse oxide ore as well as any tailings from the flotation circuit containing gold and silver. The CIL gold plant is on schedule for commissioning in November 2015.

Metallurgical test work on Pearse sulphide ore indicates gold recoveries of approximately 70-75% at the flotation plant with a further 15% from the CIL plant. APP Securities estimates total gold recoveries of 85%.

The planned hiatus of delivering underground ore to the mill while the company explores and delineates reserves underground is expected to improve the quality and quality of the mill feed significantly. We estimate unit costs per tonne milled to decrease as a result going forward.

**Chart 1. Mill Throughput at Mineral Hill (kt)**

![Erecting of CIL Tanks](source: APP Securities Pty Ltd)

![Flotation Cells](source: APP Securities Pty Ltd)

Source: APPS estimates
KBL Offers Material Upside at Current Share Price

We have calculated an NPV of A$73.8M or A$0.11ps for the Mineral Hill operations, net the impact of the Quintana funding deal. Our NPV is based on APP Securities commodity price forecast.

Table 1. APP Securities Commodity Price Forecasts

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold A$/oz</td>
<td>1507</td>
<td>1507</td>
<td>1507</td>
<td>1507</td>
<td>1507</td>
<td>1507</td>
<td>1507</td>
</tr>
<tr>
<td>Silver A$/oz</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Lead A$/lb</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
</tr>
<tr>
<td>Zinc A$/lb</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
<td>1.23</td>
</tr>
<tr>
<td>Copper A$/lb</td>
<td>3.42</td>
<td>3.42</td>
<td>3.42</td>
<td>3.42</td>
<td>3.42</td>
<td>3.42</td>
<td>3.42</td>
</tr>
<tr>
<td>Exchange Rate US$/A$</td>
<td>0.73</td>
<td>0.73</td>
<td>0.73</td>
<td>0.73</td>
<td>0.73</td>
<td>0.73</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Source: APPS estimates

We estimate the total valuation of KBL at A$64.2M or A$0.10ps.

A 10% increase across all A$ denominated commodity prices lifts our valuation by 22% to A$78.2M or A$0.12ps.

Table 1. Valuation Overview

<table>
<thead>
<tr>
<th></th>
<th>ASM</th>
<th>A$ps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mineral Hill (100%)</td>
<td>73.8</td>
<td>0.11</td>
</tr>
<tr>
<td>Sorby Hills (75%)</td>
<td>5.5</td>
<td>0.01</td>
</tr>
<tr>
<td>Subtotal</td>
<td>79.4</td>
<td>0.12</td>
</tr>
<tr>
<td>Cash</td>
<td>3.5</td>
<td>0.01</td>
</tr>
<tr>
<td>Debt</td>
<td>-1.10</td>
<td>-0.02</td>
</tr>
<tr>
<td>Corporate</td>
<td>-8.9</td>
<td>-0.01</td>
</tr>
<tr>
<td>Options</td>
<td>1.2</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Valuation</td>
<td>64.2</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Source: APPS estimates

The company estimates a mine life of potentially ten years at Mineral Hill. We have based our valuation on a 7 year mine life. A prolonged mine life could provide additional upside and exploration on KBL’s tenements remain for both underground and open pit mineralisation. We have estimated annual exploration expenses at A$1.0Mpa over the life of mine.

Sorby Hills on the Back Burner

In our view the Sorby Hills lead-silver-zinc project in Western Australia is unlikely to progress in any meaningful way in the near term. We expect the company to be fully engaged in mining and processing the Pearse precious metal ore body, proving up underground reserves at Mineral Hill and exploring the immediate area in FY16.

In the absence of any material news at Sorby Hills, we believe it is unlikely investors will ascribe much value, if any, to the project despite its resources of 16.5Mt at 4.7% lead. KBL has a 75% interest in the project, with JV partner Yuguang (SSE:600531) holding the other 25%.

We have included a nominal net value of A$5.5M or A$0.01ps for Sorby Hills in our valuation for KBL. This has been derived by estimating the in situ value of the probable ore reserve of 2.4Mt at 5% lead and 54g/t silver using A$0.02/lb of lead and A$0.50/oz of silver.
This report has been prepared and issued by APP Securities Pty Ltd (“APP Securities”) and remains the property of APP Securities Pty Ltd. No material contained herein in this Research may be reproduced or distributed, except as allowed by the Copyright Act, without the prior written approval of APP Securities.

This report has been prepared and issued (in Australia) by APP Securities Pty Ltd (ABN 45 112 871 842) (AFS Licence No. 307 706) (APP Securities) and is subject to the disclosures and restrictions set out below.

Analyst Certification:
The research analyst(s) identified on the cover of this report individually certify that in respect of each security or issuer that the research analyst covers that: this report accurately reflects his or her personal views about any and all of the subject issuer(s) or securities; and no part of the research analyst’s compensation was, is, or will be directly or indirectly related to the specific recommendation(s) or views expressed by the research analyst(s) in this report.

General Disclosure
APP Securities and its associates (as defined in Chapter 1 of the Corporations Act 2001), officers, directors, employees and agents, from time to time, may own or have positions in securities of the company(ies) covered in this report and may trade in the securities mentioned either as principal or agent or may be materially interested in such securities.

APP Securities does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Disclaimer & Warning
This report may contain general advice or recommendations which, while believed to be accurate at the time of publication, are not appropriate for all persons or accounts. This report does not purport to contain all the information that a prospective investor may require. Before making an investment or trading decision, the recipient must consider market developments subsequent to the date of this document, and whether the advice is appropriate in light of his or her financial circumstances or seek further advice on its appropriateness or should form his/her own independent view given the person’s investment objectives, financial situation and particular needs regarding any securities or Financial Products mentioned herein. Information in this document has been obtained from sources believed to be true but neither APP Securities nor its associates make any recommendation or warranty concerning the Financial Products or the accuracy, or reliability or completeness of the information or the performance of the companies referred to in this document. Past performance is not indicative of future performance. This document is not an offer, invitation, solicitation or recommendation with respect to the subscription for, purchase or sale of any Financial Product, and neither this document or anything in it shall form the basis of any contract or commitment. Although every attempt has been made to verify the accuracy of the information contained in the document, liability for any errors or omissions (except any statutory liability which cannot be excluded) is specifically excluded by APP Securities, its associates, officers, directors, employees and agents. The securities of such company (ies) may not be eligible for sale in all jurisdictions or to all categories of investors.

Analysts’ Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of the analyst(s) research, client evaluation feedback, independent survey rankings and overall firm revenues, which include revenues from, among other business units and corporate finance.

Other International Investors: International investors outside the US, UK, UAE or Canada are encouraged to contact their local regulatory authorities to determine whether any restrictions apply to their ability to purchase this investment and should seek their own advice.

Recipient Representations/Warranties: By accepting this report, the recipient represents and warrants that he or she is entitled to receive such report in accordance with the restrictions set out in this document and agrees to be bound by the limitations contained herein. Any failure to comply with these limitations may constitute a violation of law.

Meanings of APP Securities Stock Ratings
Buy – Describes stocks that we expect to provide a total return (price appreciation plus gross yield) of 10% or more within a 12-month period.
Underperform – Describes stocks that we expect to provide a total return (price appreciation plus gross yield) of less than 10% within a 12-month period.
NR – The investment rating and price target have been temporarily suspended. Such suspensions are in compliance with applicable regulations and/or APP Securities policies.
GS – Coverage Suspended. APP Securities has suspended coverage of this company.
Speculative Buy – Describes stocks we research with a positive bias, whose company fundamentals and/or financials are being covered, but for which there is insufficient information for APP Securities to assign a Buy or Underperform rating.
Speculative Underperform – Describes stocks we research with a negative bias, whose company fundamentals and/or financials are being covered, but for which there is insufficient information for APP Securities to assign a Buy or Underperform rating.
Secondary recommendation - Market weight relative to the S&P/ASX 300 under a weighting range of 0-3, with intervals of 0.5 (7 point scale). 1.0 indicates a market weight position in the stock while a weight over 1.0 indicates an overweight position and the current level of analyst conviction.
Monitor – Describes stocks whose company fundamentals and/or financials are being monitored, or for which no financial projections or opinions on the investment merits of the company are provided.

It is permitted for the total expected returns to be temporarily outside the prescribed ranges due to extreme market volatility or other justifiable company or industry-specific reasons.

Free Float (float / current shares outstanding) *100 – This float figure is the number of shares that are available to the public and is calculated by subtracting the shares held by insiders and those deemed to be stagnant shareholders. Stagnant holders include ESOP’s, ESOT’s, QUEST’s, employee benefit trusts, founding shareholder equity stake plus senior management equity stake, corporations not actively managing money, venture capital companies and shares held by Governments.

Terminal Value methodology - APP Securities’ Discounted Cash Flow (DCF) valuation applies a terminal growth rate to the last forecast year’s cash flow and discounts the amount using Weighted Average Cost of Capital (WACC). The Terminal Value is tested using ASX-listed company multiples. For resource companies there is no terminal value because cash flows are forecast to the end of mine life.

Meanings of APP Securities Credit Ratings
Buy – If the last traded price of the hybrid security is more than 3% below our valuation
Underperform – If the last traded price of the hybrid security is more than 3% above our valuation

Valuation Methodology
APP Securities’ methodology for assigning stock and credit ratings may include the following: market capitalisation, maturity, growth/value, volatility and expected total return over the next 12 months. The price targets are based on several methodologies, which may include, but are not restricted to, analyses of market risk, growth rate, revenue stream, discounted cash flow (DCF), EBITDA, EPS, cash flow (CF), free cash flow (FCF), EBITDA, P/E, PE(growth), P/CF, P/FCF, premium (discount)/average group P/E, sum of parts, net asset value, discounted dividend model (DDM), franking credits and return on equity (ROE) over the next 12 months. Listed credit securities analysis uses appropriate discount rates that reflect credit risk of both issuer and the underlying instrument.

© Copyright APP Securities Pty Ltd