

## MARDIE OPTIMISATION POSITIVE; IRON ORE PRICE TAILWINDS CONTINUE

BCI Minerals Limited (BCI) recently reported the outcomes of a Pre-Feasibility Optimisation Study for the Mardie Salt & Potash Project. Key changes to the development case include;

- Salt production increasing from 3.5Mtpa to 4.0Mtpa
- SOP production increasing from 75ktpa to 100ktpa
- Salt cash costs reducing by 19% to A\$16/t FOB
- SOP cash costs reducing by 16% to A\$211/t FOB
- Total capital costs increasing from A\$335m to A\$498m, mainly due to 1) a new port now being constructed on site and not at Cape Preston East (CPE) which was previously envisaged, and 2) an increase in the size of the evaporation ponds and SOP plant to facilitate the increase in production.

The study is overwhelmingly positive, with reported pre-tax NPV<sub>10</sub> increasing to A\$560M, however it does require a significant uplift in the capital funding envelope. We believe this could be addressed through a number of options, which include 1) the divestment of additional iron ore assets, 2) securing an infrastructure funding partner, and 3) delaying the SOP side of the operation to reduce initial capital costs by A\$100m. We also note the track record of support from largest shareholder Wroxy Pty Ltd (29.1% - recently acquire ~1% on-market), who has supported every capital raising by BCI and predecessor company Iron Ore Holdings.

**Mardie Port.** Results from the updated PFS indicate that the cost of the port at Mardie will be A\$200m. Although this is considerably more expensive than the CPE option (\$75m vs \$200m), we still believe that the decision to focus on a port at the project site rather than that at CPE is the right one. Having the port on site will eliminate road haulage costs thus decreasing operating costs significantly, which we believe is essential in a long-life 60 year project. The Mardie Port option is also entirely independent, whereas the CPE option relied on some port facilities already by the time Mardie needed to use it. In terms of funding the port, we feel that a good option for BCI would be to look for an infrastructure funding partner. One in particular that we feel would be suitable is the Northern Australia Infrastructure Finance (NAIF), they are a A\$5 billion government lending facility that looks to provide loans to infrastructure projects in Northern Australia.

**Sell the Iron Valley Royalty to reduce equity dilution?** With the price of iron ore now above US\$100/t, BCI's earnings will significantly increase if prices remain at these levels. With conservative prices, we now value the NPV of the Iron Valley Royalty at A\$58m with upside if prices remain high or if Mineral Resources Ltd implements the 'BOSS' light rail. Selling the Iron Valley Royalty to reduce the amount of capital needing to be raised for the Mardie project seems like a viable option.

**Valuation: \$0.30/share (prior: \$0.25/share).** Our Valuation has increased by \$0.05/share as we have adjusted our numbers to reflect the increased production of both Salt and SOP and have increased the price at which equity may be raised given the 40% increase in the share price since we initiated back in March.

| Year End June 30      | 2017A | 2018A  | 2019F | 2020F  | 2021F   |
|-----------------------|-------|--------|-------|--------|---------|
| Reported NPAT (A\$m)  | 5.7   | (16.9) | 12.1  | (4.5)  | (3.4)   |
| Recurrent NPAT (A\$m) | 5.7   | (16.9) | (4.9) | (4.5)  | (3.4)   |
| Recurrent EPS (cents) | 1.4   | (4.3)  | (1.2) | (1.1)  | (0.4)   |
| EPS Growth (%)        | na    | na     | na    | na     | na      |
| PER (x)               | na    | na     | na    | na     | na      |
| EBITDA (A\$m)         | 9.5   | (14.4) | (3.7) | (2.1)  | (1.6)   |
| Capex (A\$m)          | 2.2   | 10.1   | 0.1   | 46.5   | 105.0   |
| Free Cashflow         | 11.2  | (22.0) | (5.4) | (43.1) | (100.8) |
| FCFPS (cents)         | 2.8   | (5.5)  | (1.4) | (10.8) | (12.8)  |
| PFCF (x)              | na    | na     | na    | na     | na      |
| DPS (cents)           | 0.0   | 0.0    | 0.0   | 0.0    | 0.0     |
| Yield (%)             | 0.0   | 0.0    | 0.0   | 0.0    | 0.0     |
| Franking (%)          | 0.0   | 0.0    | 0.0   | 0.0    | 0.0     |

24 May 2019

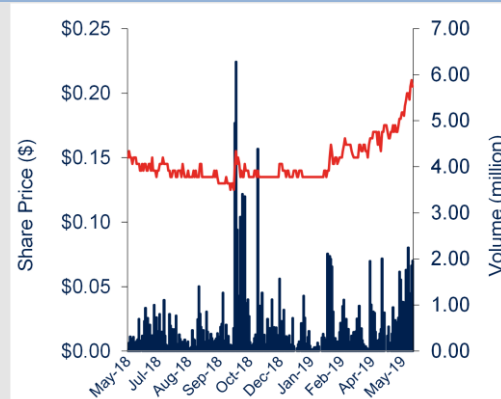
| 12mth Rating       | SPECULATIVE BUY |      |
|--------------------|-----------------|------|
| Price              | A\$             | 0.21 |
| Target Price       | A\$             | 0.30 |
| 12mth Total Return | %               | 45.5 |

|                    |                    |           |
|--------------------|--------------------|-----------|
| RIC: <b>BCI.AX</b> | BBG: <b>BCI AU</b> |           |
| Shares o/s         | m                  | 397.6     |
| Free Float         | %                  | 63.0      |
| Market Cap.        | A\$m               | 81.5      |
| Net Debt (Cash)    | A\$m               | -13.1     |
| Net Debt/Equity    | %                  | na        |
| 3mth Av. D. T'over | A\$m               | 0.116     |
| 52wk High/Low      | A\$                | 0.21/0.13 |
| 2yr adj. beta      |                    | 0.71      |

|                   |          |
|-------------------|----------|
| <b>Valuation:</b> |          |
| Methodology       | DCF      |
| Value per share   | A\$ 0.30 |

|                 |                   |
|-----------------|-------------------|
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## 12 Month Share Price Performance



| Performance %    | 1mth | 3mth | 12mth |
|------------------|------|------|-------|
| Absolute         | 24.2 | 32.3 | 36.7  |
| Rel. S&P/ASX 300 | 22.5 | 27.3 | 29.1  |

Figure 1: Changes in key assumptions

| Assumption              | PFS   | Optimised PFS  |
|-------------------------|---|--|
| Salt Production Target  | 3.5Mtpa   | 4.0Mtpa  |
| SOP Production Target   | 75ktpa  | 100ktpa  |
| Seawater Intake         | 132GLpa<br>4.2Mtpa NaCl<br>135ktpa SOP equivalent                 | 147GLpa<br>4.7Mtpa NaCl<br>150ktpa SOP equivalent        |
| Concentrator Pond Area  | 70km <sup>2</sup>   | 79km <sup>2</sup>  |
| Crystalliser Area       | 17km <sup>2</sup>   | 20km <sup>2</sup>  |
| NaCl Total Recovery     | 83%   | 85%  |
| SOP Total Recovery      | 56%   | 67%  |
| Salt Logistics          | Trucked ~70km to Cape Preston East for export (bulk freight)      | Exported directly from Mardie Port (bulk freight)        |
| SOP Logistics           | Trucked ~100km to the Dampier Cargo Wharf for export (bulka bags) | Exported directly from Mardie Port (bulk and bulka bags) |
| Capex Estimate          | A\$335M   | A\$498M  |
| Sustaining Capex        | A\$1.7M pa  | A\$6.0M pa   |
| Salt Cash Cost Estimate | A\$20/t   | A\$16/t  |
| SOP Cash Cost Estimate  | A\$250/t  | A\$211/t   |
| Operating Life          | 30 years  | 60 years   |
| Salt Price              | US\$30/t FOB  | Unchanged  |
| SOP Price               | US\$500/t FOB   | Unchanged  |
| Exchange Rate           | 0.75 US\$ per A\$   | 0.70 US\$ per A\$  |
| Discount Rate           | 10% real  | Unchanged  |

Source: BCI Minerals Limited

### Changes in reported key metrics

- Pre-tax NPV now A\$560m (previously A\$335m)
- EBITDA of \$155m (previously A\$102m)
- IRR unchanged at 20%

## FUNDING OPTIONS

### Divestment of Iron ore portfolio

With capital costs now totalling A\$498m, we feel BCI could continue to look at the divestment of its iron ore assets to reduce its capital raising requirements. With the Iron ore price now climbing above US\$100/t, BCI earnings from its Iron Valley Royalty will increase significantly if the higher prices are maintained. In our valuation of the Iron Valley Royalty we assume a long term iron ore price of US\$70/t which is 30% below the current price. Our valuation could again potentially increase with the implementation of the BOSS light rail system to upwards of \$85m, which we believe would significantly reduce equity dilution if BCI manages to sell the asset in the near term. BCI is also exploring options for the divestment of its Buckland Project and the CPE port rights, currently we value both of these assets in range of \$14-20m.

Figure 2: Iron Valley Royalty (No BOSS)

| Case 1: No Boss |       | 1    | 2   | 3   | 4   | 5   | 6   | 7   | 8    | 9    | 10   | 11   | 12   | 13   |
|-----------------|-------|------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| Production      | Mtpa  | 7.5  | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5  | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  |
| Royalty A\$/t   | A\$/t | 1.5  | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2  | 1.2  | 1.2  | 1.2  | 1.2  | 1.2  |
| Royalty         | A\$M  | 10.5 | 9.9 | 9.9 | 9.9 | 9.5 | 9.3 | 9.3 | 9.2  | 9.2  | 9.2  | 9.2  | 9.2  | 9.2  |
| Tax             |       |      |     |     |     |     |     |     | -2.8 | -2.8 | -2.8 | -2.8 | -2.1 | -2.1 |
| Royalty         | A\$M  | 10.5 | 9.9 | 9.9 | 9.9 | 9.5 | 9.3 | 9.3 | 6.5  | 6.5  | 6.5  | 6.5  | 7.2  | 7.1  |
| Post Tax NPV    | A\$M  | \$58 |     |     |     |     |     |     |      |      |      |      |      |      |

Source: Patersons Research

Figure 3: Iron Valley Royalty (BOSS railway included)

| Case 2: Boss |       | 1    | 2   | 3    | 4    | 5    | 6    | 7    | 8    | 9 | 10 | 11 | 12 | 13 |
|--------------|-------|------|-----|------|------|------|------|------|------|---|----|----|----|----|
| Production   | Mtpa  | 7.5  | 7.5 | 12.0 | 14.0 | 14.0 | 14.0 | 14.0 | 12.0 |   |    |    |    |    |
| Royalty      | A\$/t | 1.5  | 1.3 | 1.6  | 1.6  | 1.6  | 1.6  | 1.6  | 1.6  |   |    |    |    |    |
| Royalty      | A\$M  | 10.5 | 9.9 | 19.2 | 22.4 | 22.4 | 22.4 | 22.4 | 19.2 |   |    |    |    |    |
| Tax          |       |      |     |      |      |      | -6.7 | -6.7 | -5.8 |   |    |    |    |    |
| Royalty      | A\$M  | 10.5 | 9.9 | 19.2 | 22.4 | 22.4 | 15.7 | 15.7 | 13.4 |   |    |    |    |    |
| Post Tax NPV | A\$M  | \$85 |     |      |      |      |      |      |      |   |    |    |    |    |

Source: Patersons Research

## Northern Australia Infrastructure Facility (NAIF)

Another potential option for BCI is The Northern Australia Infrastructure Facility (NAIF), a corporate Commonwealth entity that has a \$5 billion lending facility that looks provides loans to infrastructure projects in northern Australia. Given the Mardie port's ability for public benefit which would be able to service multiple users we feel the port is an ideal project for the NAIF. The NAIF can lend up to 100% of the debt, provided there is appropriate risk sharing. Some of the projects the NAIF has granted funding for include:

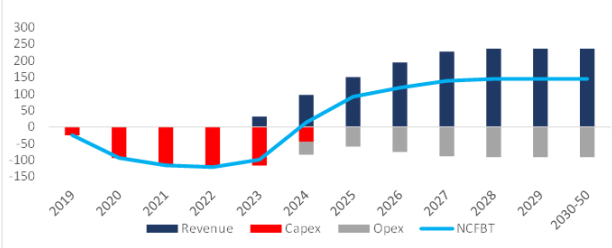
- Kalium Lakes Limited, WA, Up to \$74 million
- Northern Territory Airports, NT, up to \$150 million.
- James Cook University, Queensland, up to \$98 million.
- Sheffield Resources Limited, WA, up to \$95 million.
- Commercial In confidence project, Queensland, up to \$50 million.
- Voyages Indigenous Tourism Australia, NT, up to \$27.5 million.
- Pilbara Minerals Limited, WA, up to \$19.5 million.
- Onslow Marine Supply Base, WA, up to \$16.8 million.
- Humpty Doo Barramundi Farm, NT, up to \$7.18 million, with potential up to \$30 million over three stages.
- Genex Power, Queensland, \$450 - \$516 million.
- Amaroo (Verdant), NT, up to \$160 million.

## Delay the SOP side of the Operation?

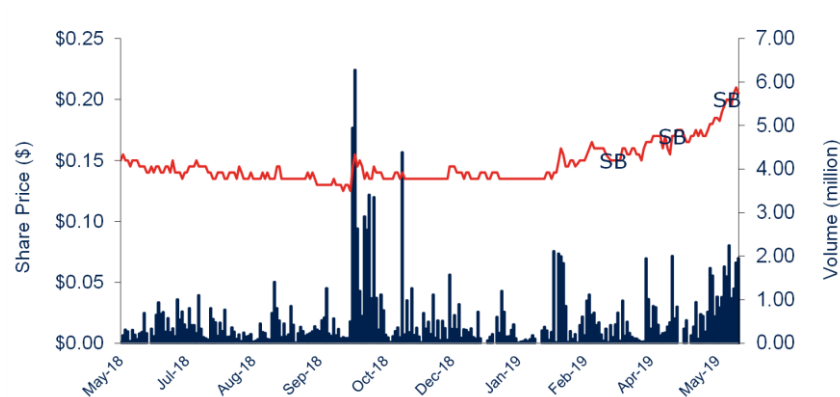
Another possible way in which BCI can look to reduce capital costs could be to delay the timing on the SOP side of the operation. BCI could look to commence an expanded production scenario in which they would hold off on producing SOP, ensure that the salt side of the operation can be proven at a commercial scale and then look to expand into SOP after, thus minimising early capital and investor risk. If BCI were to undertake this option it would potentially reduce the capital costs of the project by A\$100m, combining this with the potential asset sale of the Iron Valley Royalty, funding becomes a lot more manageable.

## VALUATION

Our BCI valuation is based on a discounted cash flow analysis of the Mardie Project risk weighted at 50% and the discounted cash flow analysis of the Iron Valley Royalty. Although we have increased the equity component of the capital requirements, our valuation has increased by \$0.05/share as we have adjusted our numbers to reflect the increased production of both Salt and SOP and have increased the price at which equity may be raised given the 40% increase in the share price. We currently have a \$0.30/share price target and maintain our Speculative Buy rating.

| BCI MINERALS (BCI.ASX)  |  |            |        | Price                         |        | \$0.21  | Year End 30 June |        |        |        |  |
|---|--|------------|--------|-------------------------------|--------|---------|------------------|--------|--------|--------|--|
| Valuation   |  | \$m        | \$/sh  | Commodity Assumptions         |        | 2017A   | 2018A            | 2019F  | 2020F  | 2021F  |  |
| Mardie Project (Risked at 50%)  |  | 153        | 0.10   | US\$/A\$                      |        | 0.75    | 0.77             | 0.72   | 0.73   | 0.73   |  |
| Iron Valley   |  | 59         | 0.04   | Platts 62%Fe (US\$/dmt CFR)   |        | 72      | 70               | 81     | 75     | 75     |  |
| Other Assets  |  | 14         | 0.01   | NaCl Price (FOB) (US\$/t)     |        | 30      | 30               | 30     | 30     | 30     |  |
| Net Cash (Post DFS Spend)   |  | 17         | 0.01   | SOP Price (FOB) (US\$/t)      |        | 500     | 500              | 500    | 500    | 500    |  |
| Unpaid Capital  |  | 250        | 0.16   | Iron Valley                   |        | 2017A   | 2018A            | 2019F  | 2020F  | 2021F  |  |
| Corporate costs   |  | (32)       | (0.02) | Annual production (Mt)        |        | 8.0     | 6.1              | 7.5    | 7.5    | 7.5    |  |
| Total Valuation   |  | 461        | 0.30   | Royalty A\$/t                 |        | 2.3     | 0.9              | 1.5    | 1.3    | 1.3    |  |
|   |  |            |        | EBITDA A\$m                   |        | 18.3    | 5.6              | 7.4    | 9.9    | 9.9    |  |
| Cash Flow Mardie Project  |  |            |        | Profit & Loss (A\$m)          |        | 2017A   | 2018A            | 2019F  | 2020F  | 2021F  |  |
|  |  |            |        | Total revenue                 |        | 63.5    | 33.0             | 49.2   | 55.8   | 55.8   |  |
|   |  |            |        | Cost of Sales                 |        | (54.0)  | (47.4)           | (52.8) | (58.0) | (57.5) |  |
|   |  |            |        | EBITDA                        |        | 9.5     | (14.4)           | (3.7)  | (2.1)  | (1.6)  |  |
|   |  |            |        | DD&A                          |        | (3.0)   | (2.9)            | (3.0)  | (3.0)  | (3.0)  |  |
|   |  |            |        | EBIT                          |        | 6.5     | (17.3)           | (6.7)  | (5.2)  | (4.6)  |  |
|   |  |            |        | Net interest income (expense) |        | 0.6     | 0.4              | 0.3    | 0.7    | 1.2    |  |
|   |  |            |        | NPAT (Before abnormals)       |        | 5.7     | (16.9)           | (4.9)  | (4.5)  | (3.4)  |  |
|   |  |            |        | NPAT (Reported)               |        | 5.7     | (16.9)           | 12.1   | (4.5)  | (3.4)  |  |
|   |  |            |        | Diluted EPS (cps)             |        | 1.4     | (4.3)            | (1.2)  | (1.1)  | (0.4)  |  |
|   |  |            |        | DPS (cps)                     |        | 0.0     | 0.0              | 0.0    | 0.0    | 0.0    |  |
| Iron Valley Reserves & Resources  |  |            |        | Cash Flow (A\$m)              |        | 2017A   | 2018A            | 2019F  | 2020F  | 2021F  |  |
| Operating Cashflow  |  | 11.9       | (12.0) | (5.4)                         | 3.4    | 4.2     |                  |        |        |        |  |
| Capex (+exploration)  |  | (0.6)      | (10.0) | 0.0                           | (46.5) | (105.0) |                  |        |        |        |  |
| Property, plant & equipment   |  | (1.6)      | (0.1)  | (0.1)                         | 0.0    | 0.0     |                  |        |        |        |  |
| Divestment of Assets  |  | 0.0        | 0.0    | 27.0                          | 10.0   | 0.0     |                  |        |        |        |  |
| Cash Flows from Investing activities  |  | (2.2)      | (10.1) | 26.9                          | (36.5) | (105.0) |                  |        |        |        |  |
| Proceeds from equity issues   |  | 24.2       | 0.0    | 0.0                           | 70.0   | 85.0    |                  |        |        |        |  |
| Proceeds from borrowings  |  | 0.0        | 0.0    | 0.0                           | 0.0    | 0.0     |                  |        |        |        |  |
| Repayment of borrowings   |  | (2.0)      | 0.0    | 0.0                           | 0.0    | 0.0     |                  |        |        |        |  |
| other   |  | (5.2)      | (1.3)  | 0.0                           | 0.0    | 0.0     |                  |        |        |        |  |
| Cash Flows from Financing activities  |  | 17.1       | (1.3)  | 0.0                           | 70.0   | 85.0    |                  |        |        |        |  |
| Net increase in cash and cash equivalents   |  | 26.7       | (23.3) | 21.6                          | 36.9   | (15.8)  |                  |        |        |        |  |
| Cash at beginning   |  | 9.7        | 36.4   | 13.0                          | 34.6   | 71.5    |                  |        |        |        |  |
| Cash at end   |  | 36.4       | 13.0   | 34.6                          | 71.5   | 55.7    |                  |        |        |        |  |
| Directors & Management  |  |            |        | Balance Sheet (A\$m)          |        | 2017A   | 2018A            | 2019F  | 2020F  | 2021F  |  |
| Cash  |  | 36.4       | 13.1   | 34.6                          | 71.5   | 55.7    |                  |        |        |        |  |
| Total Assets  |  | 119.6      | 100.5  | 112.6                         | 190.9  | 275.6   |                  |        |        |        |  |
| Creditors   |  | 12.1       | 9.4    | 11.5                          | 11.5   | 11.5    |                  |        |        |        |  |
| Current Borrowings  |  | 0.0        | 0.0    | 0.0                           | 0.0    | 0.0     |                  |        |        |        |  |
| Non-current Borrowings  |  | 0.0        | 0.0    | 0.0                           | 0.0    | 0.0     |                  |        |        |        |  |
| Provisions  |  | 5.2        | 6.1    | (2.4)                         | 10.4   | 13.4    |                  |        |        |        |  |
| Total Liabilities   |  | 17.3       | 15.4   | 9.1                           | 21.9   | 24.9    |                  |        |        |        |  |
| Shareholders Funds  |  | 107.2      | 90.6   | 103.5                         | 169.1  | 250.7   |                  |        |        |        |  |
| Top Shareholders  |  |            |        |                               |        |         |                  |        |        |        |  |
|   |  | Shares (m) | %      |                               |        |         |                  |        |        |        |  |
| Wroxby Pty Ltd  |  | 111        | 29.1   |                               |        |         |                  |        |        |        |  |
| One Managed Investment Funds Limited  |  | 10         | 2.6    |                               |        |         |                  |        |        |        |  |
| Mineralogy Pty Ltd.   |  | 6          | 1.5    |                               |        |         |                  |        |        |        |  |
| Pacific Level Pty Ltd   |  | 5          | 1.2    |                               |        |         |                  |        |        |        |  |
| Alwyn Vorster   |  | 4          | 1.0    |                               |        |         |                  |        |        |        |  |
| Top 5 Shareholders  |  | 135.9      | 34     |                               |        |         |                  |        |        |        |  |

## Recommendation History



| Date      | Type                | Target Price | Share Price | Recommendation | Return |
|-----------|---------------------|--------------|-------------|----------------|--------|
| 12 Mar 19 | Research Note       | 0.25         | 0.15        | SB             |        |
| 16 Apr 19 | Research Note       | 0.25         | 0.17        | SB             | 13.3%  |
| 17 May 19 | Hot off the Press   | 0.25         | 0.20        | SB             | 14.7%  |
|           | Current Share Price |              | 0.21        |                | 5.1%   |

**Stock recommendations:** Investment ratings are a function of Patersons expectation of total return (forecast price appreciation plus dividend yield) within the next 12 months. The investment ratings are Buy (expected total return of 10% or more), Hold (-10% to +10% total return) and Sell (> 10% negative total return). In addition we have a Speculative Buy rating covering higher risk stocks that may not be of investment grade due to low market capitalisation, high debt levels, or significant risks in the business model. Investment ratings are determined at the time of initiation of coverage, or a change in target price. At other times the expected total return may fall outside of these ranges because of price movements and/or volatility. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. This Document is not to be passed on to any third party without our prior written consent.



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Patersons Securities does, and seeks to do, business with companies that are the subjects of its research reports.

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| BSX | Patersons Securities have acted for Blackstone Minerals Limited (BSX) within the past two years and have received fees for these services. |
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| CSS | Patersons Securities have acted for Clean Seas Seafood Limited (CSS) within the past two years and have received fees for these services.  |
| GLL | Patersons Securities have acted for Galilee Energy Limited (GLL) within the past two years and have received fees for these services.      |
| IBG | Patersons Securities have acted for Ironbark Zinc Limited (IBG) within the past two years and have received fees for these services.       |
| NUS | Patersons Securities have acted for Nusantara Resources (NUS) within the past two years and have received fees for these services.         |
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| SYA | Patersons Securities have acted for Sayona Mining Limited (SYA) within the past two years and have received fees for these services.       |
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| WKT | Patersons Securities have acted for Walkabout Resources Ltd (WKT) within the past two years and have received fees for these services.     |
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