

Thorny River nearing production & BOD's AI Opportunity

Following the successful proof of concept diamond mining operation at Marsfontein over the last 12 months, in this updated note we re-value the nearby Thorny River project, where mining operations could start later this year, along with other near production and advanced assets. We also examine the exciting and transformational potential for BOD to exploit recent advances in computing technology to exploit its vast Sekaka database through the application of Artificial Intelligence (AI).

- Production at **Thorny River** could commence in Q2 this year on a contract mining basis, following receipt of final permit approvals and assuming a pickup in diamond prices. BOD has already proved a similar concept of production at nearby Marsfontein.
- Results from a gravity survey just to the south of the **KX36 discovery** in January '24 show there is a strong indication of additional kimberlites on the property, which raises the possibility that KX36 could be developed as a stand-alone project, without requiring its production in conjunction with a Ghaghoo mine re-start.
- Recent technological advances in **Artificial Intelligence (AI)** creates an opportunity for BOD to exploit the enormous diamond exploration database (600 GB) it obtained from Sekaka in 2020. At the AGM last month, the management said they are hopeful that a deal can "structure a way forward to mine the data".
- BOD expanded its exploration and mining activities to **Eswatini** (former Swaziland) in January '24 after being granted prospecting licences over 4,000 hectares as part of a consortium. The new ground is prospective for **fancy pink** and **Type IIA** diamonds that command much higher prices than conventional diamonds.
- The management are continuing to actively pursue licensing deals in **Zimbabwe** and to seek a JV partner for a potential re-start for the **Ghaghoo** mine opportunity.

Recommendation & Value – To value BOD's two most advanced assets, Thorny River and KX36, we have used a risked based valuation approach. A project opportunity value (\$3.6m) is applied to Ghaghoo, a figure that could rise substantially to over \$36.1m if a JV partner is secured and a deal with Gem Diamonds completed.

The values for Thorny River and KX36 are based on what we estimate these assets could be worth if sold within the next 12 months. A move into production at Thorny River, hopefully later this year will help validate the project's economic viability and underpin its value to any would be suitor. Also, results from the recent gravity survey near KX36 could add further exploration value.

Other assets for the moment are unvalued or valued at a notional cost as they are earlier stage, albeit many hold potential to add significant value and become company makers, such as the new licences obtained in Eswatini. There could also be considerable upside potential from the identification and prioritisation of high impact exploration targets through the application of AI technology on the Sekaka database.

Given the recent drop in rough diamond prices, due to the impact of high interest rates on luxury goods purchases and to some extent on competition from lab grown alternatives, we have applied a 30% pricing discount to our £67.0m valuation to arrive at £46.9m. As global interest rates drop later this year, we anticipate a rebound in diamond prices and renewed interest in companies such as BOD with exposure to both production and exploration assets. Investors may be wise to position themselves ahead of this potential rebound. We thus have a price range of 4.2p to 6.0p and 'Buy' recommendation for the shares.

Valuation Summary	Value Feb '24	Value Oct '22	Value Oct '21
US\$ Total	\$84.4m	\$76.3m	\$66.3m
<i>less 30% pricing discount</i>	\$59.1m	n/a	n/a
GBP £ Total	£46.9m to £67.0m	£67.0m	£48.7m
Price per Share	4.2p to 6.0p	6.8p	6.1p

Fig 1: Enterprise Value Summary. The full table is shown in Fig 5 of this report. (Source FEQ).



TP 4.2p to 6.0p

MARKET DATA:

Name:	Botswana Diamonds
Ticker:	BOD.L
Price:	0.41p
SII:	1,120m
Market Cap:	£4.6m
Sector:	Resources
Listing:	AIM – London & Botswana SE

FINANCIALS:

Y/E:	30 June
Last Finc Results:	Finals- 20/12/23
Cash:	est. £260K- (31/01/24)
Last Placing:	£380K – Nov '23 at 0.50p.

ACTIVITIES:

Exploration & development of diamond projects in Botswana, South Africa and Eswatini.

KEY PROJECTS / ASSETS:

Thorny River (76%)
KX36 (100%)
Maibwe (36%)
Reivilo (100%)
Sunland & Sekaka (100%)
Eswatini (30%)

DIRECTORS & MANAGEMENT:

John Teeling (Exec Chairman)
James Campbell (MD)
Jim Finn (FD)
David Horgan (Dir)
Robert Bouquet (Dir)

SHAREHOLDINGS: (>3%)

Pershing Intl' Nominee	13.1%
Interactive Investor SN Ltd	9.4%
John Teeling (Dir)	5.7%
HSBC Global Cust Nom Ltd	5.3%
Hargreaves Lansdown Nominee	3.1%
Jim Finn (Dir)	3.5%

Total Director Holdings 129.9m (11.6%)

**First Equity Limited acts as Broker to Botswana Diamonds Plc.*

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Thorny River (South Africa)

Final approvals at Thorny River are anticipated during Q1 2024. Once granted, and assuming diamond prices improve and energy prices drop back, production would then commence on a contract mining basis. This would be similar to operations at Marsfontein, with equipment transferred between sites. BOD would receive a 15% to 25% royalty depending on the size of diamonds recovered, which will probably average out at about 17.5%, similar to Marsfontein.

If Thorny River can be shown to be a profitable mining operation the potential for the asset to be sold to another mining company increases substantially. Our valuation is therefore based on an asset value approach to understand its risked end point value if BOD sold its stake today.

The conceptual open pit mine optimisation evaluation (RNS: 25 Apr 22) provides the foundation for our risked valuation asset calculation at Thorny River. This uses a mid-case scenario, with the mining of open-pit ore of 1.7m tonnes, open pit waste of 4.5m, a strip ratio of 2.68, average grade of 40 cpht and diamond value of \$170 per carat.

To derive a risked valuation, a high resource risk of 35% is applied, as the resource at Thorny River is not at a SAMREC or JORC defined stage, along with a relatively low development/finance risk of 10%, given the open-pit nature of the deposit, modest capital development costs and proof of concept validation achieved at Marsfontein. A risked value of \$40.0m is derived.

BOD's current conceptual analysis is based upon just the River Blow and does not factor in potential for any nearby discovery blows to be mined on the property. An estimated current exploration value of \$10.0m is calculated at one quarter the risked NPV of the main River Blow deposit, giving a final risked value of \$50.0m for the entire project.

Thorny River Est.		
Est Value		Notes
\$97.1m		Pre-tax discounted cashflow NPV10, before CAPEX, based on US\$170 per carat, average grade of 40 cpht and open pit ore of 1.7m tonnes within one year of production. (100% Project Interest).
\$94.7m	(\$2.4m)	Less capex, est. 45m ZAR. (prev. 40 ZAR)
\$90.0m	(\$4.7m)	Less 5% est. govt royalty (could be between 0.5% and 7%).
\$58.5m	(\$31.5m)	Less 35% resource risk.
\$52.6m	(\$5.9m)	Less 10% development/finance risk. (prev. 20%)
\$40.0m		76% net project Interest to BOD.
	\$10.0m	Exploration value for additional resources (25% of above value).
\$50.0m		TOTAL est. PROJECT VALUE net to BOD (prev. \$44.5m)

Fig 2: Thorny River estimated valuation (Source FEQ).

KX36 (Botswana)

Initial results from a gravity survey (23 Jan '24 RNS) provided a strong indication of additional kimberlites on the licences with one high-grade anomaly 6 kms south of the existing KX36 discovery providing an excellent gravity response, like that of known kimberlites and similar size to KX36. The management believe given its strong gravity signature, that once drilled it could prove to be kimberlite. Results from the three other anomalies are expected in the coming weeks.

The valuation of KX36 follows a similar approach to our Ghaghoo estimates, using the historic SAMREC defined resource. Development and commercialisation of KX36 is dependent to some extent on the re-start of nearby Ghaghoo, as substantial cost synergies can be achieved from shared infrastructure and management if both are operational simultaneously.

The recent gravity results and new kimberlite targets shows there is scope to upgrade the existing resource and increased possibility of KX36 being developed as a stand along project, without the need for it to be developed in conjunction with Ghaghoo. We have therefore lowered our development risk factor from 40% to 25% to arrive at an estimated project value of \$29.5m.

We have not considered the value of the in-situ bulk sampling plant, including crushing, screening, scrubbing, dense media separation and x-ray recovery assets in our calculations.

KX36 est.		
Indicated	Inferred	Notes
17.9mt	6.7mt	Historic SAMREC resource.
6.3m carats at 35 cpht	2.4m carats at 36 cpht	Contained carats.
\$539m value at \$86/ct.	\$207m value at \$86/ct.	In the ground value, at 50% of modelled upside to \$107/ct.
\$43.1m (8% est.)	\$3.1m (1.5% est.)	Est. Value attributable for Indicated and Inferred carats.
\$36.6m	\$2.6m	Less 5% Petra royalty & 10% govt royalty.
\$27.5m	\$2.0m	Less 25% est. development risk. (prev 40%)
\$29.5m (prev. \$23.5m)		TOTAL est. PROJECT VALUE net to BOD

Fig 3: KX36 Valuation (Source FEQ).

Ghaghoo (Botswana)

Although the long stop date on the shares sales agreement with Gem Diamonds has lapsed over a Ghaghoo mine re-start, there is still potential for BOD to reach an agreement with a partner and re-engage with Gem Diamonds on similar terms (11 May '22 RNS).

Initial production from a restart operation would likely come from processing dump material. Before any underground operations can commence, the mine would require dewatering, a process taking around 4 months to complete. Mill and replacement technology will be required to be put into place prior to full scale underground mining. Operating efficiencies could be achieved, for example from the installation of solar power to replace expensive diesel generation.

An estimated 'project opportunity value' approach is used for valuing Ghaghoo, by applying a large 90% deal execution risk on our previous estimated project sum of \$36.1m from the 5 Oct '21 research broker note. If BOD re-engage with Gem Diamonds and secure a JV partner, then this risk factor would be significantly reduced or removed.

Ghaghoo est.		
Indicated	Inferred	Notes
79.3mt	28.7mt	2014 SAMREC resource.
15.5m carats at 19.5 cpht	5.1m carats at 17.5 cpht	Contained carats, less 150,000 carats mined from indicated resource.
\$3.7bn value at \$242/ct	\$1.2bn value at \$239/ct	In the ground value at 100% ownership Level.
\$370.6m	\$120.5m	10% BOD Interest.
\$29.6m (8% est.)	\$1.8m (1.5% est.)	Est. value attributable for indicated and inferred carats, net to BOD.
\$26.7m	\$1.6m	Less 10% government royalty.
\$22.7m	\$1.4m	Less 15% est. production restart risk.
	\$24.1m	BOD's 10% risked project value.
	\$12.0m	Value of 20% option = 25% of 10% free carry.
	\$36.1m	Total est. project value net to BOD.
	(\$32.5m)	Deduct 90% deal execution risk (prev. 80%)
	\$3.6m	Project Opportunity Value.

Fig 4: Ghaghoo Valuation (Source FEQ).

OTHER BOD ASSETS & OPPORTUNITIES

The remainder of this report summarises other BOD assets to which we have not applied a value as they are at an early or pre-resource stage, although with additional exploration expenditure and possible JV deals secured many of these could add significant value to shareholders.

Maibwe JV (Botswana)

An effective 26% stake is held in the Maibwe JV, upon which a cluster of four diamond bearing kimberlites on PL186 have been identified. There are also significant quantities of microdiamonds in one of these pipes.

Exploration work on the project was held back for several years due to the main JV partner, BCL, being in liquidation.

Reivilo (Botswana)

The Group holds a 5-year licence (until June 2027) over the Reivilo cluster of kimberlites in South Africa. A previous licence holder discovered a cluster of three kimberlite pipes. A data licence agreement is in place with Petra Diamonds to access their library of data on the Reivilo cluster. It is hoped that once microdiamond analyses are completed on a recently taken sample, a preliminary grade estimate can be determined.

Sunland & Sekaka (Botswana)

Along with the Maibwe JV, BOD holds a large amount of acreage in the Kalahari of Botswana via Sunland Minerals Pty Ltd and Sekaka Diamonds Pty Ltd. Within the licences several geophysical and geochemical anomalies have been discovered.

Although 16 of the licences held under Sunland recently expired, BOD has re-applied for 4 of these which it believes have significant potential. These are expected to be awarded within the near future.

Sekaka Database (Botswana) - AI Potential?

Following acquisition of Sekaka Diamonds in 2020, BOD gained ownership of an extensive database built up from 2005 to 2020, representing the largest diamond data set in Botswana. This includes data on 375,000km of airborne geophysical data, 228,000km of soil sample results, 606 ground geophysical surveys and 32,000km of drill logs, which takes up 600 gigabytes (GB) of memory.

To understand the best opportunities, drill prospects and kimberlite sources, there could be an opportunity to exploit recent computing advances by applying Artificial Intelligence (AI) and machine learning technologies to the database. With AI technology and mining based exploration algorithms, more data points can be incorporated to streamline the exploration process and thereby improve the odds of making an economic diamond discovery.

AI based exploration systems have a significant advantage in that they could identify patterns and correlations to reveal relationships hidden deep within the large Sekaka database much quicker than human interpretation. There could also be scope to use AI drones to conduct autonomous drilling on AI identified targets to minimise costs.

In summary, we believe that the opportunity to apply AI technology to the Sekaka database could make Botswana Diamonds pioneers within this area. As explained in the recent Annual Report, the management are hopeful that a deal can be done to "structure a way forward to mine this data".

Eswatini Licence

Eswatini (known as Swaziland before 2018) represents a new country for Group activities, following the granting of prospecting licences for just under 4,000 hectares in January 2024, as part of a consortium in which BOD holds a 30% interest.

The licence contains at least two kimberlite pipes and three kimberlite dykes. One of the pipes was mined by Transhex between 1986 and 1996, with 720,222 carats recovered. Of note is the presence of fancy pink and Type IIA (very chemically

pure) diamonds from the mine, which command much higher prices than conventional diamonds.

According to an internal estimate the kimberlite resource could be over 10m tonnes at a depth of 200 metres, with the dumps holding 2m tonnes.

In the near-term BOD plans to undertake a desktop review and analysis of secondary sources. Bulk sampling of the dumps and kimberlite stockpile could then follow.

Zimbabwe Projects?

As explained in the recent AGM presentation, BOD is “actively pursuing licences and deals” in Zimbabwe. The management believe the country is highly prospective due to its geological terrain and the lack of modern diamond exploration techniques which have been used in the country over the past 30 years.

Group Valuation

Project / Asset	Value Feb '24	Value Oct '22	Value Oct '21	Valuation Method / Notes
Thorny River	\$50.0m	\$44.5m	nil	Risked NPV + Exploration Upside
KX36	\$29.5m	\$23.5m	\$29.5m	Risked Resource
Ghaghoo	\$3.6m	\$7.2m	\$36.1m	Project Opportunity Value
Other Projects	\$1.0m	\$0.8m	\$0.5m	Notional Cost
Maibwe JV	TBD	TBD	TBD	
Sunland/Sekaka	TBD	TBD	TBD	
Reivilo	TBD	TBD	TBD	
Eswatini Licences	TBD	n/a	n/a	
Cash	\$0.3m	\$0.3m	\$0.2m	
US\$ Total	\$84.4m	\$76.3m	\$66.3m	
<i>less 30% pricing discount</i>	\$59.1m	n/a	n/a	
Ex Rate	(£/\$1.26)	(£/\$1.14)	(£/\$1.36)	
GBP£ Total	£46.9m to £67.0m	£67.0m	£48.7m	
SII	1,120m	956m	793m	
Price per Share	4.2p to 6.0p	6.8p	6.1p	

Fig 5: Group Valuation Total (Source FEQ).

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First Equity Limited clients and employees hold shares and warrants in Botswana Diamonds plc.

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