

The story behind AK6 and the Karowe diamond mine

For my money one of the most interesting presentations at the recent Junior Indaba held at the Country Club was the one delivered by James Campbell, which recounted the history of the AK6 kimberlite in Botswana. Entitled *How a junior developed a billion dollar asset and a major walked away*, James's talk provided an insider's view of the development of AK6, which is now the foundation of the incredibly successful Karowe mine.

James made a similar presentation a few weeks prior to the Junior Indaba when he was one of the speakers at the Botswana Diamond Explorers Conference, held at the Orapa mine – located not too far from AK6 – in late April. This conference coincided with the 50th anniversary of the discovery of Orapa in 1967 by a De Beers team that was led by Dr Gavin Lamont and included Jim Gibson and Manfred Marx (with Marx being the one to actually make the find).

I think most readers will be aware that De Beers sold its share in the AK6 project in 2009 to Vancouver-based Lucara for a paltry US\$49 million and that Lucara then went on to develop a mine that has thus far (as at December 2016) yielded 1,8 million carats, generating revenue of US\$1,02 billion at an average price of US\$566 per carat. Perhaps less well-known is the sharp divisions between De Beers and its joint venture partner on the project, junior explorer African Diamonds (AFD), which ended up in court in 2008 when De Beers tried to put the project on hold – by applying for a retention licence – in the face of AFD's objections.

AK6, as it happens, was discovered in 1969, two years after Orapa, in the same year as Letlhakane, and several years before Jwaneng. It was assessed by De Beers between 1972 and 1975 but was dismissed as being sub-economic because of its small size (circa 3,4 ha), its poor mineral chemistry and its low grade (3,5 cpht). Although all these assumptions proved to be wrong, it is perhaps understandable that De Beers – which by then had the two most valuable kimberlites in history in the bag in the shape of Orapa and Jwaneng – should have decided not to pursue AK6 further.

James, whose own career has included a long stint at De Beers which saw him serving as GM for Advanced Exploration and Resource Delivery and as Personal Assistant to Nicky Oppenheimer, attributes De Beers' failure to appreciate the potential of AK6 back in the 1970s to a number of factors. Among them was the company's failure to sample the kimberlite

sufficiently and the excessive diamond breakage which occurred as a result of using cable tool (jumper) drilling.

Fast forward 30 or so years and AK6 was again under assessment, with De Beers and AFD forming a joint venture in 2004 to explore their contiguous ground holdings in the Orapa area, including AK6, using modern technology.

In 2007 AFD – which by this time had James as its MD – produced a pre-feasibility on AK6 which showed healthy economics. A feasibility study completed the following year by De Beers reached a different conclusion, determining that the project had a negative NPV and would, in any event, cost a whopping US\$380 million to develop. AFD responded in 2009 with an Alternative Value Engineering Study which essentially confirmed its earlier pre-feasibility study, which had indicated that the project was viable and could be built for much less than the figure estimated by De Beers.

As I've already mentioned, AFD fought tooth and nail to advance the project in the face of De Beers' opposition. Space doesn't allow me to go into all the ins and outs of what happened but suffice it to say that by 2010 Lucara had taken over both De Beers' and AFD's shares in the project. It proceeded to develop AK6 as the Karowe mine along the lines suggested by AFD – with the capex being roughly a third of the De Beers estimate – with first production being achieved in 2012.

The rest, as they say, is history. Karowe has proved to be a truly exceptional diamond mine, producing a seemingly endless flow of outsized stones including the plus-1 100-carat *Lesedi la Rona*, the second biggest diamond ever found.

In his presentations, James looks at the reasons why AFD and De Beers perceived AK6 so differently. At the risk of over-simplifying his views, he clearly believes that juniors are far more suited to developing projects such as AK6 than behemoths such as De Beers, which have high 'hurdle rates' for new developments, a low appetite for risk, veer towards being technologically conservative and, in addition, can be bureaucratic and slow moving.

James, by the way, is now the MD of Botswana Diamonds, which is essentially the successor company to AFD, and is once again teamed up with his old colleague in AFD, Irish mining entrepreneur John Teeling. I recently interviewed James in Gaborone and will be reporting at length on the activities of Botswana Diamonds in our next issue.

Arthur Tassell



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