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Powertech

DIAMONDS

A review of Southern Africa's diamond sector

November 2014

source – with rough production sold at $805.24/ct in 2013, compared with $552.87/ct in 2012.

Many other African countries fetched prices of more than $250/ct for their rough diamonds, including Lesotho, Liberia, Sierra Leone and Tanzania.

The diamond production from the Democratic Republic of Congo (DRC) is the world's cheapest, with rough selling at $8.84/ct. In terms of volume, the DRC is the world's third-largest producer, with 15.68-million carats produced in 2013.

Zimbabwe, which joined the league of diamond mining heavyweights only a few years ago, registered a sharp drop in its production in 2013. Output declined by 16% year-on-year to $538.5-million. Its volume of production eased 14% to 10.41-million carats and its average rough prices declined 3% to $51.72/ct.

Zimbabwe diamond miners have complained that the quality of diamonds at their mines is declining and requested that government allocate new concessions. China-owned Anjin, which is the largest diamond miner in the 85 000 ha Marange field, reported in March 2014 that the company was in survival mode, as it recovered only low-grade diamonds that were not worth much on the market. Anjin is one of seven diamond mining companies operating in Marange. Some of the mining firms claim alluvial deposits are running out and that they are required to invest in new technology to switch to conglomerate and kimberlitic diamond mining, which takes place in deep underground mines.

Industry analysts estimate that production will increase by between 3% and 6% in 2014, led by the new production from Russia and a recovery in the DRC. The year will mark the first full 12 months of production at LUKoil's four-million-carat-a-year Grib mine, in Russia. Gem Diamonds also commissioned a new mine in Botswana, Ghaghoo, in mid-2014.

The largest new diamond mine set to enter production in the near future is the Gahcho Kué project, in Canada's Northwest Territories, which De Beers is developing in partnership with a Canadian junior. The operation is expected to produce four-million carats a year by the end of 2017.

Stornoway Diamonds is also developing the Renard project, in Canada, which will produce between 1.5-million to 2-million carats a year when it enters production in 2017.

Together, Gahcho Kué and Renard will more than double Canada's diamond output. Independent analyst Paul Zimnisky estimates the two new mines will increase the country's share of the global market to 25.2% in value, and 15.1% in volume by 2018.

Other large-scale commercial mines scheduled to start operations in the next four years include Lace, in South Africa; Liqhobong, in Lesotho; Botuobinskaya, in Russia; and Bunder, in India.

The Lace mine, which DiamondCorp is developing, will ultimately produce 500 000 ct/y and is scheduled to start production in late 2015. Alrosa owns the Botuobinskaya mine, which will produce 1.5-million carats a year. The mine is nearing completion and will start operatiions in the middle of 2015. Rio Tinto is advancing studies on the Bunder project and should the company move ahead with mine development, the mine will enter production in 2017, with a production profile of 700 000 ct/y.

Petra Diamonds is also expanding its existing mines in Africa, which will increase its production by two-million carats a year by 2019.

Reports by De Beers, McKinsey & Company and Bain & Company, as well as other industry participants, all point to a projected decline in diamond production in the second half of the decade.

Bain & Company is forecasting peak diamond production of 169-million carats in 2018, after which it estimates

Top diamond-producing countries 2013

Country ranking in terms of volume				Country ranking in terms of value			
Rank	**Country**	**Volume (ct)**		**Rank**	**Country**	**Value ($)**	
1	Russia	37.88-million	↑	1	Botswana	3.63-billion	↑
2	Botswana	23.19-million	↑	2	Russia	3.11-billion	↑
3	DRC	15.68-million	↓	3	Canada	1.91-billion	↓
4	Australia	11.73-million	↑	4	Namibia	1.36-billion	↑
5	Canada	10.56-million	↑	5	Angola	1.28-billion	↑
6	Zimbabwe	10.41-million	↓	6	South Africa	1.19-billion	↑
7	Angola	9.36-million	↑	7	Zimbabwe	538.48-million	↑
8	South Africa	8.14-million	↑	8	Australia	381.14-million	↓
9	Namibia	1.69-million	↑	9	Lesotho	242.15-million	↓
10	Sierra Leone	0.61-million	↑	10	Sierra Leone	184.48-million	↑

Compiled from Kimberley Process Certification Scheme data

MAJOR DIAMOND COMPANIES

For more than a century, De Beers – now a subsidiary of Anglo American – had a monopoly on the global diamond industry, controlling the world's supply and prices. When producers from Russia, Canada and Australia started to sell the diamonds they mined directly to manufacturers in the early 2000s, more diamond miners and producers became major players in the industry.

Currently, De Beers and Alrosa dominate the global industry, controlling nearly 50% of the industry by volume and 60% of the industry by value, but there are several smaller, yet significant diamond entities, including Rio Tinto, Dominion Diamond Corp, Petra Diamonds, Gem Diamonds, Lucara Diamond Corp, the Angolan government and Zimbabwe's Marange fields.

In 2013, BHP Billiton exited the diamond business when it completed the sale of its stake in the Ekati diamond mine, in Canada, to Dominion Diamond Corp.

De Beers

Established in Kimberley, South Africa, in 1888, De Beers is the world's leading diamond producer by value, with a 35% market share. Together with its joint venture (JV) partners, the group operates in more than 20 countries, across six continents. It also has exploration ventures across continents, and mining operations in Botswana, Canada, Namibia and South Africa. The group also has marketing and corporate offices in the UK and retail stores worldwide.

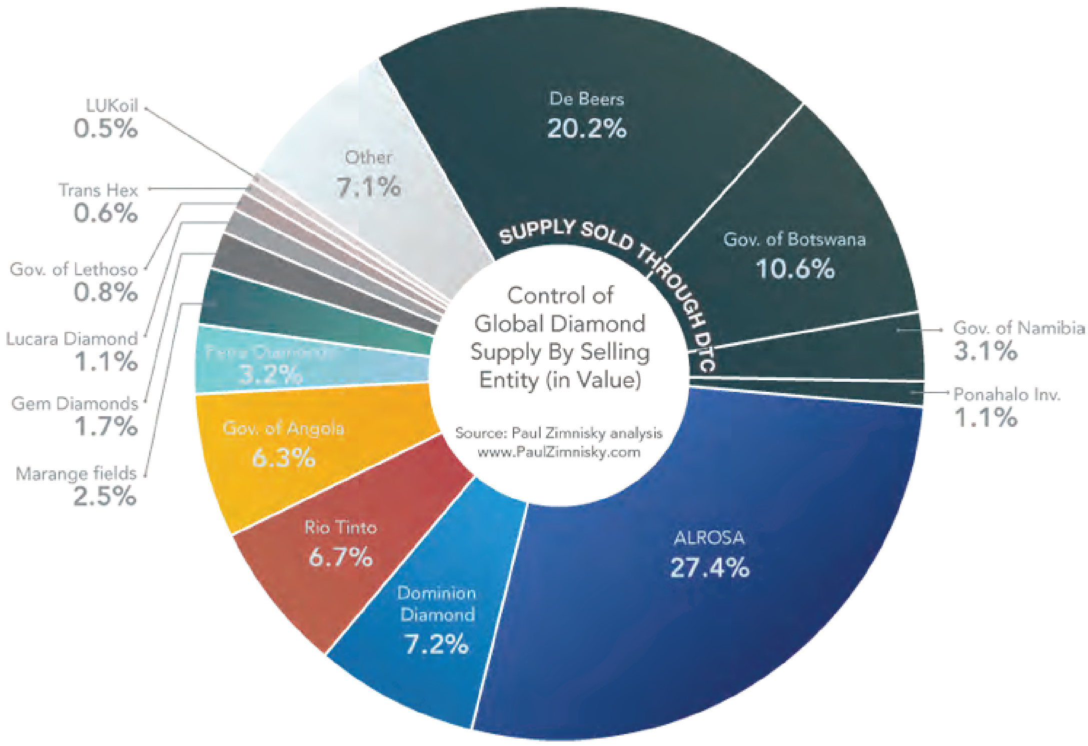
De Beers employs more than 23 000 people (directly and as contractors) across the diamond pipeline.

For decades, De Beers was controlled by successive generations of the Oppenheimer family, which in 2012 sold its 40% stake to Anglo American for $5.1-billion, raising the diversified mining group's interest in the diamond miner to 85%. The government of diamond-rich Botswana controls the rest of the business.

De Beers vaulted into the top spot as the key contributor to Anglo American's underlying earnings in the first half of the 2014 financial year.

De Beers' mining operations are concentrated in Southern Africa and Canada. The company holds a 50% interest in Botswana's Debswana Diamond Company and in Namibia's Namdeb Holdings, with the governments of the two countries its respective joint partners. In South Africa, De Beers has a 74% shareholding in De Beers Consolidated Mines (DBCM), with a consortium of broad-based black economic-empowerment investors (BBBEE) holding the balance. De Beers wholly owns De Beers Canada, which operates its first two mines outside Africa.

Control of global diamond supply by selling entity



Source: Paul Zimnisky (www.paulzimnisky.com) to develop the underground mine. The scope of work comprises the building of the entire underground mine, including the sinking, equipping and commissioning of a decline shaft and two vertical shafts; horizontal tunnel development to provide access to and establish loading levels; and associated ventilation, ground and water-handling infrastructure. M&R Cementation's local project team will be complemented with project management and operational capacity from its cementation mining companies, in Australia and Canada. The company will use the "more advanced" Canadian shaft-sinking method for sinking the vertical shafts, with M&R Cementation Canada providing specialist training for the shaft-sinking crews.

The design of the Venetia underground mine provides for an automated driverless horizontal truck-haulage system. Having been used at the Northern Cape-based Finsch mine, which De Beers sold to Petra Diamonds, driverless truck loops are a tried-and-tested technology.

The Venetia underground mine will provide employment for 1 800 people well into the 2040s. The project is supporting 8 000 jobs directly and a further 5 000 through the supply chain.

The Venetia project is regarded as a significant boost for the South African mining industry as it signals confidence in the future of the country. The project is expected to contribute $19.9-billion towards the South African economy from 2012 to 2043, $7.8-billion of which will be a direct contribution.

De Beers Consolidated Mines

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Compiled from Anglo American 2013 annual report and De Beers website

De Beers Canada

De Beers has been active in Canada for nearly 50 years, developing from a small group of geologists to having multiple offices and operations across the North American country. De Beers has two producing mines, an advanced exploration project and a targeted exploration strategy in Canada.

In July 2008, De Beers officially opened the Snap Lake mine, in the Northwest Territories, and the Victor mine, in Ontario, becoming the group's first diamond mines outside Africa. Together, these two mines produced 1.97-million carats in 2013, which was a 26% improvement on 2012's production of 1.56-million carats.

De Beers significantly improved its performance at Snap Lake during 2013, with carats recovered increasing by about 50%, owing to a focus on throughput and mining efficiency. At Victor, carat recovery exceeded expectations.

In the first six months of 2014, Snap Lake contributed 647 000 ct and Victor 328 000 ct to De Beers Canada's 975 000 ct output for the period.

De Beers Canada 2014 interim production

Carats recovered (100% basis)	H1 2014	H1 2013	H1 2014 vs H1 2013
Snap Lake	647 000	600 000	8%
Victor	328 000	298 000	10%
De Beers Canada	975 000	898 000	9%

Source: Anglo American, second-quarter production report

Projects

One of the world's most anticipated diamond development projects is De Beers' Gahcho Kué project, which it owns in a 51:49 partnership with Mountain Province Diamonds. The project, which is located at Kennady Lake, about 80 km east of the Snap Lake mine, is one of the largest new diamond projects under development globally. Once in operation, the mine will increase De Beers' market share from 35% to 40% of the global industry, analyst Paul Zimnisky estimates.

A revised and updated feasibility study, published in April 2014, estimates the project will cost C$859-million to construct and the operation will require working capital of C$80-million.

The mine life has been estimated at 12 years, during which the operation will produce about 53.4-million carats at an average yearly rate of 4.45-million carats using standard drill/blast and truck/shovel equipment and pit designs, which are similar to those of other openpit diamond mines operating in the area. The average yearly output for the first three years of full production from 2017 to 2019 will be about 5.6-million carats.

The Gahcho Kué deposit has National Instrument 43-101-compliant probable reserves of 55.5-million carats, contained in 35.4-million tonnes grading 1.57 ct/t.

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