

# The state of **GLOBAL ROUGH DIAMOND** supply in 2014

Debswana's Jwaneng mine in Botswana.

Photo credit: De Beers

Below: Alrosa's Nyurbinskaya mine in Russia.

Credit: Alrosa



**G**lobal production of rough diamonds in 2014 is expected to reach roughly 135 million carats valued at US\$17.8 billion, an increase of 3% over last year. The world's 50 largest mines are estimated to account for 90% of global supply, with the balance coming from private or small-scale operations, where production data is unreliable or not available at all.

The Marange diamond fields, a 300-sq.-mile alluvial deposit in Zimbabwe, was ranked the world's largest source of diamonds in 2013 in

terms of total carats produced. It was estimated to have produced almost 17 million carats or 13% of global supply last year. However, it appears that those production levels will not be sustained in 2014 as grades have decreased and easily mineable loose gravel has been rapidly depleted, leaving more difficult-to-mine conglomerate stone. While Marange is a relatively new project with formal mining starting only five years ago, alluvial projects like Marange tend to have a much shorter life span than open-pit or underground diamond mines, as the economic resource is limited to the easily accessible surface stones. None of the seven private companies operating in Marange provide specific production guidance, but representatives of the companies have publicly expressed frustration with decreased operating economics resulting from depleted resources. In 2014, Marange production is estimated to drop to 8 to 12 million carats or less.

Botswana's Orapa mine is the world's largest diamond mine measured by value of produc-



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tion and by volume. It's expected to produce 12.9 million carats worth US\$1.9 billion this year. Orapa's owner Debswana, a joint venture of De Beers and the Botswana government, realized a 17% increase in production in last year's fourth quarter, highlighted by higher grades realized at Orapa and the resumption of operations at the Orapa One processing plant following unplanned maintenance in the third quarter.

Australia's Argyle mine, known as the world's largest producer of fancy coloured diamonds, including elusive pink and red diamonds, is forecast to produce 12.6 million carats in 2014, making it the world's second largest diamond mine in terms of volume produced. While Argyle, owned by **Rio Tinto** (NYSE: RIO, LSE: RIO), has a history of producing some of the most precious colored diamonds in world, unpopular brown diamonds, most of which are classified as industrial quality, account for the majority of Argyle's production making the mine's average carat value produced among the lowest in the world.

The Russian government-run super-major **Alrosa** (MICEX: ALRS) has nine primary diamond mines, ten alluvial mines, and two mines in development, accounting for roughly 95% of all Russian diamond production. Alrosa's mines represent eight out of the top fifteen largest diamond mines in the



Debswana's Orapa plant, in Botswana. Debswana is a 50/50 joint venture between De Beers and the Botswana government.

Photo credit: De Beers

world by volume. Alrosa's Jubilee and Nyurbinskaya mines are each forecast to produce over 9 million carats in 2014, making them the fourth and fifth largest projects in the world.

De Beers has completed construction of the Cut-8 expansion at Jwaneng, the second largest diamond mine in Botswana. Full ramp-up of Cut-8, which will extend Jwaneng's mine life to at least 2025, should be realized sometime this year. Cut-8 will provide access to around 95 million carats of high-quality diamonds, making Jwaneng the most valuable diamond reserve in the world. Jwaneng recovered from a slope failure in the second quarter of 2012, and is forecast to produce over 9 million carats

## Top 25 Diamond Mines by Volume

MINE	PRODUCTION LOCATION	PRODUCTION (carats)	LIFE OF (US\$)	MINE	OWNERSHIP
1. Orapa	Botswana	12.9 M	\$1.9 B	13	Debswana (50% De Beers, 50% gov't of Botswana)
2. Argyle	Australia	12.6 M	\$504 M	14	Rio Tinto
3. Marange (A)	Zimbabwe	12 M	\$360 M	5	Various
4. Jubilee	Russia	9.4 M	\$1.2 B	17	Alrosa
5. Nyurbinskaya	Russia	9.2 M	\$1.2 B	8	Alrosa
6. Jwaneng	Botswana	9.1 M	\$1.3 B	15	Debswana
7. Catoca	Angola	7.2 M	\$953 M	30	Alrosa 32.8%, gov't of Angola 32.8%, LLI 18%, Odebrecht 16.4%
8. Aikhal	Russia	6.5 M	\$859 M	28	Alrosa
9. Diavik	Canada	6.1 M	\$763 M	9	Rio Tinto 60%, Dominion Diamond 40%
10. Udachniy	Russia	5.5 M	\$730 M	37	Alrosa
11. International	Russia	4.6 M	\$607 M	12	Alrosa
12. Venetia	South Africa	3.6 M	\$518 M	27	De Beers 74%, Ponaohlo Holdings 26%
13. Almazy Anabara Placers (A)	Russia	2.5 M	\$330 M	12	Alrosa
14. Nizhne-Lenskoye Placers (A)	Russia	2.5 M	\$330 M	N/A	Alrosa
15. Mir	Russia	2.3 M	\$298 M	62	Alrosa
16. Finsch	South Africa	2 M	\$220 M	22	Petra Diamonds 74% Senakha 21%, Petra Employee Trust 5%
17. Debswana	Namibia (offshore)	1.2 M	\$638 M	53	Debswana
18. Snap Lake	Canada	1 M	\$99 M	15	De Beers
19. Ekati	Canada	1 M	\$350 M	18	Dominion Diamond 80%, Stu Blusson 10%, Chuck Fipke 10%
20. Cullinan	South Africa	920,000	\$128 M	57	Petra Diamonds 74%, Thembinkosi 14%, Petra Employee Trust 12%
21. Letlhakane	Botswana	890,000	\$129 M	12	Debswana
22. Arkangelskaya	Russia	850,000	\$112 M	42	Severalmaz (Alrosa/Arkhangelsk)
23. Mirny Placers (A)	Russia	840,000	\$109 M	N/A	Alrosa
24. Victor	Canada	830,000	\$352 M	5	De Beers
25. Nyurba Placers (A)	Russia	820,000	\$108 M	28	Alrosa

Notes: "A" denotes an alluvial deposit.

Table courtesy of [www.paulzimmisky.com](http://www.paulzimmisky.com)





Rough diamonds from De Beers Consolidated Mines, South Africa.

Photo credit: De Beers

of diamonds worth US\$1.3 billion in 2014.

Venetia, Another De Beers mine and South Africa's largest diamond mine, realized a production increase of 57% in the third quarter of 2013. The improvement came as a result of higher volumes and grades following recovery from flooding earlier in the year. A plan to convert Venetia to an underground mine received environmental approval in October 2013 and construction, which will increase the mine life beyond 2040, began shortly thereafter. Production at the mine this year is forecast at 3.5 million carats valued at over US\$500 million.


Lesotho, a landlocked country within South Africa's borders, is home to the Letseng mine, which has a history of consistently producing the most valuable diamonds in the world on an average per-carat basis. Letseng is forecast to produce only 110,000 carats in 2014, but the average price of carat is expected to be around US\$2,200, compared with a global average price of US\$130 per carat.

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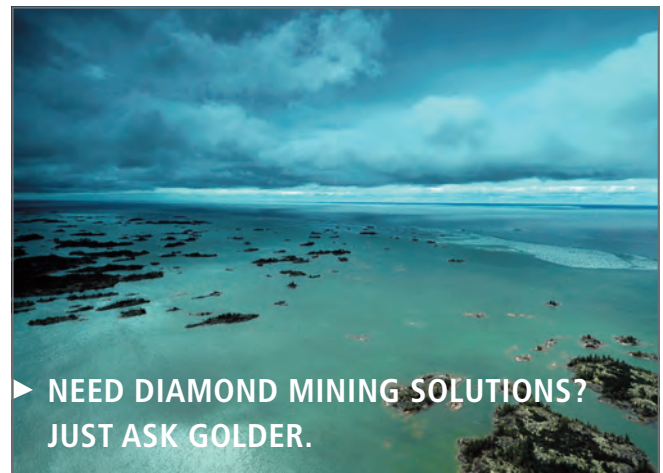
Russia's Grib mine will see its first full year of production in 2014. Estimated to produce 4 million carats annually once fully ramped up, Grib has a reserve of roughly 75 million carats and a 20-year mine life. Currently owned by Russian oil major Lukoil, the company has publicly expressed interest in selling the asset, which lies outside of its core strategy.

Botswana's Ghaghoo mine is expected to commence production in the second half of 2014. Once production is fully ramped up by owner **Gem Diamonds** (LSE: GEMD) operation is estimated to produce 750,000 carats annually worth an estimated US\$200 per carat.

The most anticipated diamond development project in the world, Canada's Gahcho Kué, continues to move forward as

permitting is expected to be approved in the second half of 2014, with first production expected in the third quarter of 2016. The project is owned by De Beers (51%) and **Mountain Province Diamonds** (TSX: MPV) Once fully ramped up, Gahcho Kué is projected to produce 4.45 million carats of diamonds annually worth an estimated US\$149 per carat. 

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