

Where Do Diamonds Really Come From?

The process may surprise you



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A lot of myth and allure surrounds the true origin of a diamond. Over the years, the industry has come under indirect scrutiny over its practices whilst the media coins phrases such as ‘blood diamonds’ and ‘conflict diamonds’ only

compounding the negative notions surrounding the sourcing and production of this timeless gem. Unless you're directly involved in the trade: mining, manufacturing or wholesaling, the reality of a diamond's arduous journey to the consumer's hand is somewhat of a mystery to most. Furthermore, with the popularity of synthetic diamonds and diamond simulant alternatives on the rise, it is worth taking a look at how remarkable the journey of a natural diamond truly is. Although one article is not enough to address these issues in detail, I dig deeper to help you discover how complicated this extraordinary process is.



Discovery

It all begins with the discovery process. Diamond mine exploration can take decades and cost billions of dollars. In 1870, large diamond deposits were discovered near Kimberly in South Africa. Africa surpasses India and Brazil as the world's largest diamond producer.

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Mining

Alluvial Mining

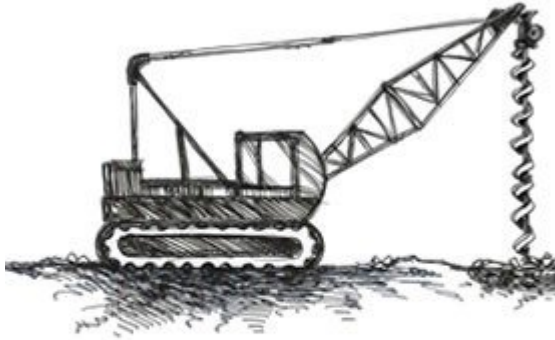
Diggers scoop up the deposited sand layers up to 60m deep to reach diamond bearing alluvial deposits,





usually found in rivers or near rivers.

Kimberlite Pipe Mining



Mechanised methods are needed to dig deeper due to today's high demand. High-technology drills and cranes are used to extract diamond-bearing rocks. Approximately 250 tons of ore is needed to yield just 1 carat of gem-quality diamond.

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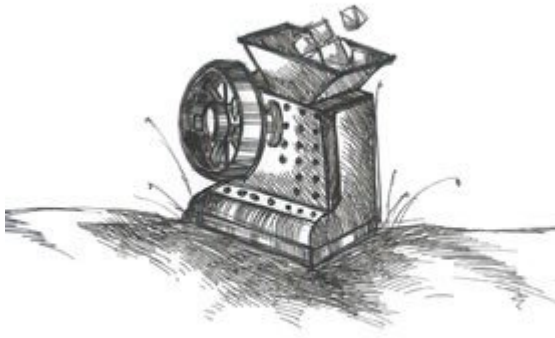
Earth Moving



Diamond bearing ore is loaded onto trucks to be transported to washing equipment and processing plants.

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Crushing & Milling



The technique used to separate diamond aggregate from soil and rock (ore), along with washing, screening and heavy media separation. The softer ore is crushed leaving the heavier and harder diamond unscathed.

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Grease Separation



The crushed ore is transferred to a sophisticated grease and water belt — as diamonds attract grease, the diamonds stick to the grease and the rest are washed out with high pressure water and air jets.

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Chemical Wash



Rough diamond crystals are chemically cleansed to be rid of surface impurities. This is done



without affecting their natural properties. Onward to sorting.

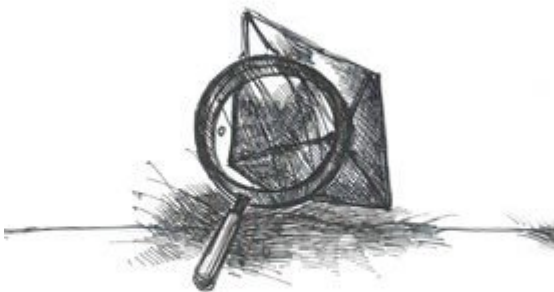
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Sizing & Sorting

The rough diamonds are sorted into various sizes using sieves, pans and automated computer-aided machines.

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Market Classification

The rough diamonds are then classified under the various gem and industrial categories. Over 80% of naturally occurring diamond is actually used for industrial purposes.

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Cutting



The diamonds for the gem market are then cut to shape using cleaving, sawing and bruting techniques to the right proportions. This is the first step to a polished diamond that we are all familiar with.

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Polishing



A facet is a tiny planar surface that traps light, disperses it and creates a sparkle. Each facet on a diamond is polished one by one to bring out its brilliance. A modern round brilliant diamond has 57 facets, all polished tirelessly by hand.

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4C Grading

Experts sort the diamonds further according to different categories





based on carat, colour, cut and clarity. Labs such as the GIA, IGI, HRD & EGL issue unique reports for each individual diamond.

[See Also: What is a Diamond](#)

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Jewellery Manufacturing

Based on a design sketch, a wax mold is made to set diamonds and other gemstones onto metals such as silver, gold and platinum.



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In the Hands of the Consumer

The diamond's journey ends in the hands of the consumer, in your hands, but the story continues...





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