

DIAMOND IN THE ROUGH

Since the first diamonds were discovered in the Gauteng province of Transvaal in South Africa over a century ago, the Cullinan mine has yielded some of the most spectacular diamonds ever to be unearthed. Last year, a 26.58 carat blue diamond rough was uncovered there, which has now been transformed into a cushion-shaped 7.03 carat internally flawless fancy vivid blue gem, the highest colour grading. **David Bennett** traces the journey of this blue rough through to its final cut and polished state, ready to be auctioned in all of its sparkling glory in Geneva this spring.



THE SOURCE

At the foothills of the Magaliesberg mountain range, 50 kilometres northeast of Pretoria in South Africa, lies the Cullinan mine. Upon discovering diamondiferous concentrate in the Pienaars River nearby, a young prospector from Johannesburg, Thomas Cullinan, bought the Elandsfontein farm, at the turn of the 20th century, beneath which he believed lay the source of these gems. As the Second Boer War came to a close, he began the business of excavating diamonds at his newly established Premier diamond mine – renamed after Cullinan in 2003 in celebration of the mine's centenary. It soon became apparent that buried beneath the 32 hectare site was one of the largest and richest diamond-bearing fields ever to be discovered in South Africa. Over the years, the mining pit has grown ever larger and now forms a crater of a half kilometre in depth. Some of the most spectacular diamonds ever seen have been recovered at Cullinan, including an estimated quarter of the world's rough diamonds, weighing over 400 carats; in addition, the Cullinan mine provides the world's most consistently reliable source of rare blue diamonds.

THE DISCOVERY

A 26.58 carat blue diamond rough was unearthed last year, the beauty of which lies in the intensity of the colour. The conditions required to form a coloured diamond scarcely ever occur in nature, making them extremely rare and therefore increasingly coveted by gem collectors the world over. Diamonds owe their colour to the presence of trace elements, or impurities and distortions, resulting from the pressures to which the diamond has been subjected as it forms. The presence of nitrogen causes the diamond to take on the most common hue, which is yellow; contact with radiation will saturate a diamond with a rare green tint; and, as in this particular case, when a diamond comes into contact with the chemical element boron during its creation, it is imbued with the extraordinarily unusual colour blue.





THE JEWEL IN THE CROWN

The Cullinan mine first gained cachet worldwide in 1905 with the discovery of the largest uncut diamond ever to be brought to light. Weighing an astonishing and, as yet unmatched, 3,106 carats – about the size of a man's fist – the rough was also blessed with a remarkable clarity and purity. The 'Cullinan Diamond', as it became known, was regarded as the 'greatest gem ever won from Nature's treasure-house' according to a local newspaper at the time. It was presented to King Edward VII of England two years later for his 66th birthday as a token of loyalty from the Transvaal people.

The King entrusted the celebrated Asscher brothers in Amsterdam with cutting the diamond. Their skill ensured that each of the eventual eleven gem-quality stones and a number of smaller fragments – eight of which are to be found in the British crown jewels – had a suitable cut and shape to generate the most beautiful lustre, transparency, refraction and dispersion of light. The largest polished gem from the original rough is the 530.2 carat pear-shaped, Cullinan I or 'The Great Star of Africa' that sits atop the Royal Sceptre, and the 317.4 carat cushion-cut Cullinan II or 'The Lesser Star of Africa', which now forms the centre of the Imperial State Crown.

Last year, a consortium led by Petra Diamonds purchased the Cullinan mine, which was previously owned by De Beers, adding to their recent acquisitions of the Koffiefontein, Williamson and Kimberley Underground mines. Each of these mines is famed for producing valuable large and coloured diamonds, such as the Williamson Pink, a 54.5 carat rough diamond uncovered in 1947, polished to form a round 'brilliant' cut 23.6 carat gem and given to the then Princess Elizabeth on the occasion of her wedding to Prince Phillip. Petra diamonds aims to continue the proud tradition of these great mines, and to benefit their surrounding communities by providing sustainable development in conjunction with local initiatives.





THE EXAMINATION

The art of transforming a diamond from a rough stone into a gem begins with careful planning and analysis of the crystal to ascertain the optimal cut and size to maximize the diamond's value and accentuate its beauty. The stone is first marked according to the shape of the rough, taking into account the number and location of imperfections and the direction of the cleavage or grain of the diamond crystal, to avoid damage when cutting. The London-based Monnickendam family firm were chosen to cut and polish the blue diamond rough. With a combined experience of over 120 years in the specialized field of diamond cutting, the team of three, headed by Gary Monnickendam, thoroughly examined the rough before deciding to transform it into a cushion-shaped gem. They polished 'windows' into the rough, and, with a keen eye, aided by the latest technology, they obtained a closer internal examination and mapped out a three-dimensional model of the rough, in preparation for the cutting process.





THE CUT AND POLISH

Since diamonds are the hardest substance known to man, only diamonds can cut diamonds. Achieving the perfect cut can take weeks or months; for example, on average a diamond saw will cut through a one carat rough diamond in four to eight hours. Even with the benefit of modern techniques, the cutting and polishing of diamonds results in a loss of as much as 50% of the stone's total weight due to the focus on creating a stone of optimal lustre and brilliance. The style of cut is particularly significant for coloured diamonds as it can intensify the hue and vibrance of the gem. The 7.03 carat cushion-shaped diamond yielded from the 26.58 carat rough, with its exceptional vivid blue tint, is a perfect example of Cullinan diamonds at their best, and will crown any connoisseur's gemstone collection.

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Magnificent Jewels

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