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WELCOME!

DIAMOND

Wednesday, 1/12/22

INTERESTING FACTS

- Hardest natural substance known to man
- 58 times harder than the next hardest mineral on Earth
- Ranks 10 on Mohs scale of hardness
- The only substance that can scratch a diamond is another diamond.
- Diamonds have always been part of engagements and weddings ceremonies.

Elizabeth Taylor's famed ring was 33.19 carats

Diamond History

- 1st discovered in caves in India between 4 and 6 B.C.
- Until the 18th century, India was thought to be the only source of diamonds. When the Indian diamond mines were depleted, the quest for alternate sources began.
- In 1725 a small deposit was found in Brazil but it was not enough to support the world demands.
- In 1866 a 15yo boy found a “pebble” along the banks of the Orange River in South Africa which turned out to be a 21.25ct diamond. This and another large finding sparked a rush of thousands of diamond prospectors to the region and led to the opening of the first large-scale mining operation which came to be known as the Kimberly Mine.
- Extreme heat, pressure, and the perfect storm of circumstance is how the diamond journey began some 100 miles deep within the earth.
- The name comes from the ancient Greek word “adamas,” meaning “unbreakable”.

DIAMOND FORMATION

- Diamond is the ONLY gem made of a single element - typically about 99.95 percent carbon. The other 0.05 percent can include one or more trace elements.
- Formed in the first couple billion years of the Earth's history.
- Brought to the surface by very deep-seated volcanic eruptions which are very rare. It is said that the last eruption occurred over 100 million years ago.
- The cooled volcanic eruptions-called-Kimberlites are typically the sources of world's mined diamonds.

MINING PROCESS AND DIFFICULTY

- Diamond mining starts around 100 miles under the ground.

- Two main types of mining techniques
  - **Open pit mining:**
  - **Underground mining:**

- Diamond mining is a major source of employment in many developing nations around the world.

MINING FOR DIAMONDS IN THE U.S.

One of the ONLY places in the world where the public can search for real diamonds in their original volcanic source, **Crater of Diamonds** in Murfreesboro, Arkansas.
Search a 37-acre field, the eroded surface of a volcanic crater, for a variety of rocks, minerals, and gemstones – and “any rock or mineral you find is yours to keep”!

More than **33,100** diamonds have been found by park visitors since the Crater of Diamonds became an Arkansas state park in 1972.
Notable diamonds found at the Crater include:

- The 40.23-carat Uncle Sam, the largest diamond ever unearthed in the U.S.
- The 16.37-carat Amarillo Starlight
- The 15.33-carat Star of Arkansas
- The 8.52-carat Esperanza.

https://www.arkansasstateparks.com/parks/crater-diamonds-state-park

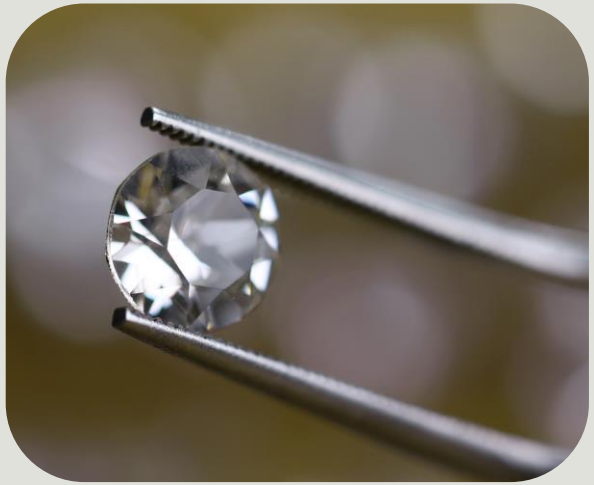
4Cs OF DIAMOND QUALITY

- GIA created the first, and now globally accepted standard for describing diamonds:

Cut

Cut refers to the shape as well as the overall dimensions and proportions of the gem. These determine how well a diamond's facets interact with light.

Clarity



The Clarity Scale is a method of measuring the size, nature, position, color or relief, and quantity of clarity characteristics visible under 10× magnification. It contains 11 grades ranging from Flawless to Included.

Color

The Color-Grading Scale measures the degree of colorlessness by comparing a diamond under controlled lighting and precise viewing conditions to master stones of established color value from D to Z.

Carat Weight

Carat Weight is a weight measurement. With all 4C's equal, price increases with carat weight as larger diamonds are rarer and more desirable.

Note: A diamond value is determined using ALL of the 4Cs.

MAE WEST

Interesting Facts:

- When World War II broke out, Mae West was one of the first celebrities to contribute to the war effort.
- She sold a considerable chunk of her collection as “Jewels for Defense” and in some cases removed the largest diamonds out of pieces to be used as drill bits in factories!
- It is rumored that most of her funds were sent to the British Royal Airforce, who in turn named their life vests “Mae Wests.”

COLOR AND TREATMENTS

- Colorless diamonds are not the only type of diamond.
- Diamonds come in many colors like: Blue, Yellow, Green, Pink, Red, Champagne, Black & Orange
- While colors can occur naturally, there are several treatments done to change diamond color and clarity such as:

1. **HPHT** (High Pressure High Temperature)
2. **LPHT** (Low Pressure High Temperature)
3. **Radiation**
4. **Surface Coating**

Red Diamond: The rarest of them all!

- Only 20 to 30 natural red diamonds exist in the entire world.
- The 0.95ct **Hancock Red** is one of the most famous red diamonds selling for $880,000 in 1987. It was the most expensive per-carat gemstone ever sold at auction at that time.
- The publicity generated by the selling price of the Hancock Red and other significant fancy-colored diamonds at auction spurred interest in these rare stones around the world, particularly with celebrities.

Shop LC Item 2388774*

*Enhancement: High Pressure High Temperature (HPHT)

Shop LC Item 3836004*

*Enhancement: Irradiation (IR)

*Item Quantities May Be Limited

Pink Diamonds: The most desirable
and ultra-rare without a doubt.

- Also known as “Argyle diamonds”
- Only found in Australia’s Argyle mine (now closed as of 2020).
- Scientists determined that pink diamonds consist of pure carbon, just like colorless diamonds, but are unable to pinpoint what exactly is changing the crystal structure to result in the gem’s warm hue.
- One of the most talked about pinks in history is **Jennifer Lopez’s** 6.1ct engagement ring.

Shop LC Item LC 4084625*

*Enhancement: NONE, Natural

*Enhancement: NONE, Natural

Shop LC Item Luxoro 10K 7274715*

*Item Quantities May Be Limited

Yellow Diamonds:

- While still considered rare, yellow diamonds are more abundant & historically owned by royalty, aristocrats, and celebrities.
- Yellow diamonds occur due to the element nitrogen, which absorbs blue light and reflects a beautiful yellow color.
- The world's most famous yellow diamond is the **Tiffany Diamond**. Discovered in the Kimberley diamond mine in South Africa in 1877, the final 287.42-carat cushion-shape diamond brilliant design boasts an unprecedented 82 facets—24 more facets than the traditional 58-facet cut!

Shop LC Item Luxoro 10K 3689136*

*Enhancement: Irradiation (IR)

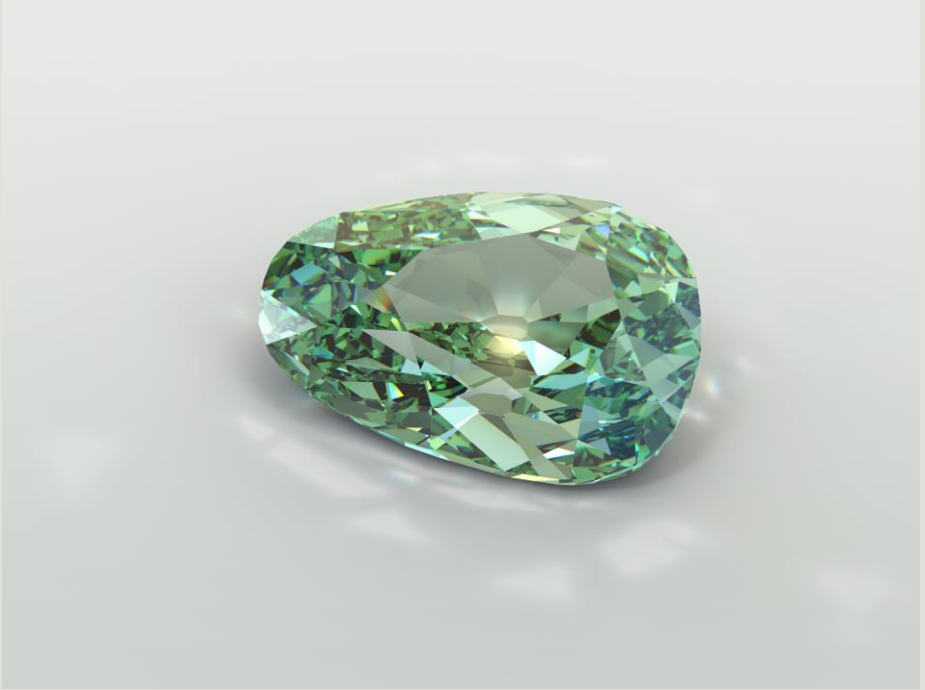
Shop LC Item LC 3492914*

*Item Quantities May Be Limited

*Enhancement: Irradiation (IR)

Green Diamonds:

- Natural green color is a result of Earth's naturally decaying radioactive materials emitting natural irradiation that penetrated the nearby diamond crystal.
- Diamonds with a uniform green color throughout the stone are exceptionally rare.



Shop LC Item LC 3809252*

*Enhancement: Irradiation (IR)

Shop LC Item LC 3815795*

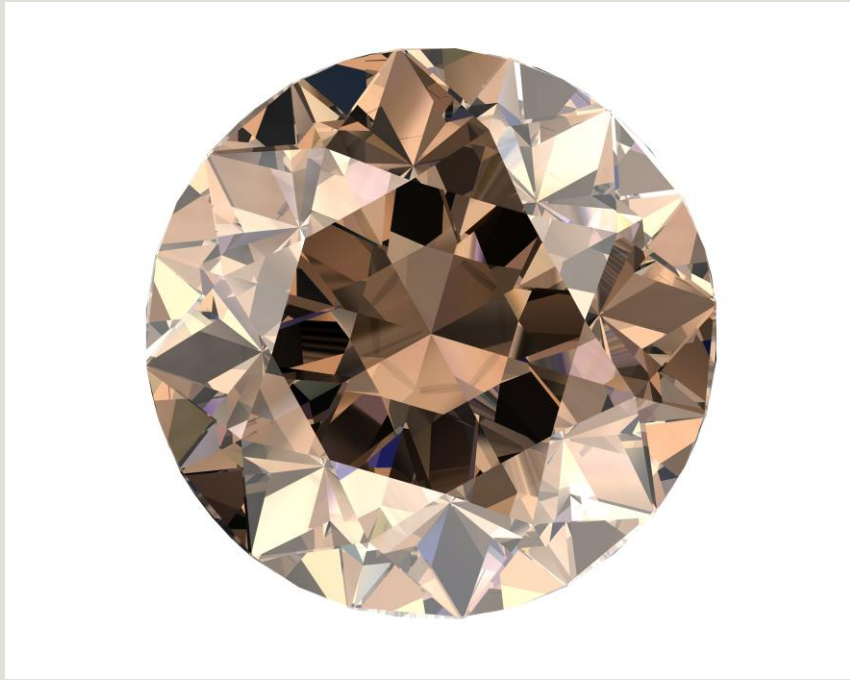
*Enhancement: Irradiation (IR)

World's Largest Green - **The Dresden Green** weighing 40.70 ct has been on display in Dresden, Germany for over 200 years. The stone originated in India. Frederick Augustus II bought the diamond in 1741 at the Leipzig fair from a Dutch merchant by the name of Delles.

*Item Quantities May Be Limited

Champagne Diamonds:

- Champagne diamonds contain Nitrogen, which is trapped during diamond's formation.
- The more nitrogen, the deeper the intensity of the brown color, the richer the hue, the rarer and more expensive the stone is.



Shop LC Item LC 7332983*

*Enhancement: NONE, Natural

Shop LC Item LC 7195460*

*Enhancement: NONE, Natural

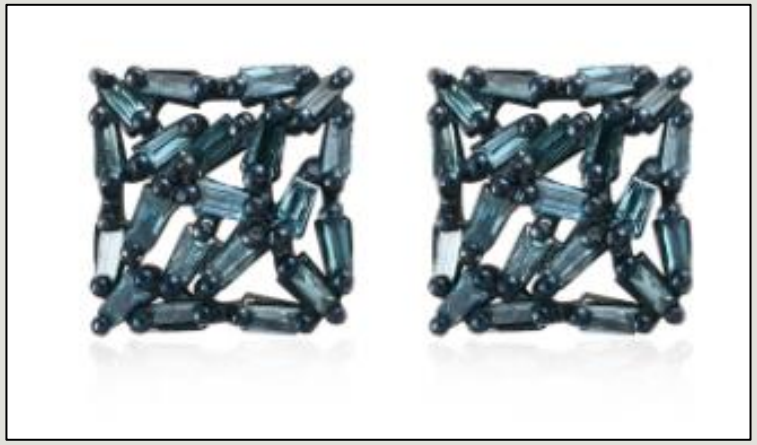
One of the most well-known champagne diamonds is **The Golden Jubilee.** Weighing in at a whopping 545.67 carats (and 755 carats in the rough), it's the largest faceted diamond in the world. Discovered in South Africa's Cullinan Diamond Mine in 1985, it was given to the King of Thailand in 1997 to celebrate his reign. It is estimated to be worth between $5 million and $12 million.

*Item Quantities May Be Limited

Blue Diamonds: Incredibly rare.

- Only found naturally in mines in South Africa, India, and Australia.
- These icy stones get their signature hue from the element boron, which replaces carbon in the diamond crystal structure during the growth process.
- Boron absorbs yellow light and thus reflects blue light.

Shop LC Item LC 7369975*



Shop LC Item LC 7370158*

*Enhancement: High Pressure High Temperature (HPHT)

Perhaps the world's most legendary gem, arrived at its present home at the Smithsonian Institution on Nov. 10, 1958 via the U.S. mail – albeit registered first class.
A Fancy dark grayish blue diamond, fashioned into a cushion brilliant cut, found in India, was originally 112 cts. before being cut to its present weight of 45.52 cts.

*Item Quantities May Be Limited

Black Diamonds:

- Diamonds with a very high number of inclusions, usually formed by chemical impurities present during the diamond's formation.

Shop LC Item LC
3318912*

*Enhancement: NONE

Shop LC Item LC
3816125*

*Enhancement: High Pressure High Temperature (HPHT)

The most famous black diamond is the 67.50 carat Black Orlov – a cushion-cut brooch surrounded by a halo of 108 colorless diamonds, hanging from a necklace that's adorned with 124 diamonds.
The legend goes that the Black Orlov or the "Eye of Brahma" as it is also known, was originally an uncut black stone of 195 cts, pried out of the eye of a sacred Hindu God Brahma statue from a temple in India.

*Item Quantities May Be Limited

SYNTHETIC AND SIMULANTS

- Synthetic diamond is essentially the same material as natural diamond, except that it is man-made.
  - Crystals grown from a carbon source with two major techniques:
    - HPHT (High Pressure High temperature)
    - CVD (Chemical Vapour Deposition)
- For years synthetic diamonds had a high cost of production and their size and quality was rather limited.
- In recent years the quality and size of synthetic diamonds have improved dramatically while the cost is rapidly and steadily decreasing making synthetics gain interest.

- Common diamond simulants which look similar to diamonds but are not diamonds include cubic zirconia (CZ), Strontium titanate and Moissanite.

Cullinan Diamond

- The historic Cullinan diamond, found in South Africa in 1905, initially weighed an astounding 3,106 cts. before being cut into 105 stones.
- The Great Star of Africa (Cullinan I) weighs 530.20 cts
- The Lesser Star of Africa (Cullinan II) weighs 317.40 cts.
- These two diamonds are part of the crown jewels of Great Britain.
- The remaining 103 diamonds cut from the Cullinan are in private collections.

Thank You