# The Red Emerald

# White Prints

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The grandeur of the acts of men are measured by the inspiration from which they spring.

~ Louis Pasteur

More historic works of Red Emerald jewelry are documented in this archive than the combined number of pieces published to celebrate this variety before.

The repository of gems presented herein represents the finest collection of Red Emerald jewelry ever assembled in human history.

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Cover Photo: "The Starfire Emerald" by David Rozendaal - 5.76 carat Oval with Multi-Colored Chatoyant *Jardin* Back Cover: "The Fox" by David Rozendaal - Constructed with Two 1/2 carat Unenhanced Red-Orange Fancy Cuts.

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### **The Rough Plan**

In the 1800s, an earthquake collapsed a mountain in Kashmir, exposing one of our planet's most famous gem deposits, filled with rich, blue sapphires. These were consumed in less than a century, are very difficult to find today and unfailingly command high prices. There are fewer Red Emeralds than the incredibly rare Kashmir Sapphires.

What if, in the future, Red Emeralds are regarded with the same legendary status? Would it be an interesting footnote if the man who gathered the most did so to honor someone he admired? What if that woman was praised by this jewel more marvelously than any other person from her time or any other time ever would be or even could be? Is there any gemstone equivalent in history?

On June 2nd, 2013, I bought the first Red Emerald I ever saw -- an uncut rough specimen weighing 31.415 carat, equal in size to the biggest found in the first 25 years of mining! The largest faceted Red Emerald was reportedly a 4.5 carat housed in the Smithsonian. The average yield for Emerald is 30%, so producing the largest Red Emerald in the world would only require someone who could attain half as much as the typical faceter in green.

I began devising most impressive piece of Red Emerald jewelry in history -- one so magnificent nobody could ignore this new precious gemstone variety any longer. This would be something never achieved before, and as the first largest, this would also be an act which could never be repeated. This large jewel would stand as an accomplishment forever.



No other gems satisfied me as rare enough to serve as complimentary accents, so I simply put more Red Emeralds together. I decided to consume such a large percentage of the above-ground supply that reproducing anything of this magnitude ever again would be impossible. I investigated, sought out, hunted down and acquired everything I could find. Fifteen months later, in September 2014, I located a second large crystal, a 21.9 carat crimson tower separated in two by a fracture plane filled with rhyolite.

With three significant pieces of rough ready for high fashioning, I began the search for a professional gemcutter. Shaping and setting the Colombian Emerald requires lapidaries who use a specific set of principles to deal with inclusions and possess refined skills uncommon to many within the industry.

Famous gems are not pulled from the ground shining in the way we prefer. Great stones are not born; they are created. Reshaping a pure mineral crystal with flat surfaces causes those planes to act as tiny mirrors inside a gem. Specifically-orienting the "mirrors" allows light from the Sun or the outside world to return as a "Flash" or "Fire". The natural scarcity of large crystals allows limited opportunities to produce substantial examples.



#### Above: First Red Emerald Crystal

Below: 21.9 carat Prism before separation. Note the rhyolite plane in the middle where separation occurred. The crystal was snapped in two by hand (not my doing!) immediately following this photo.

Left: Second Prism after separation.

Top Half -- 10.8 carat Bottom Half -- 11.1 carat



### **The First Ones**

The Brilliant Princess

1.62 carat Emerald Cut



Diamonds are Type I gemstones, making them common enough they are typically cut using only the best and most flawless materials. Perfect crystals allow faceters to create precision-shaped works of art. Emeralds are Type III gems, meaning they are so rare every stone contains some level of inclusions, which complicates the process of shaping a gem. Twenty thousand carats of green emerald exist for each single carat in the red variety. The extreme presence of crystal damage, fractures and inclusions in Red Emerald make them difficult to work with, especially in the mineral state.

The American Society of Gemcutters certified Stephen Kotlowski as a Supreme Master. Stephen served as the head lapidary with Krementz Gemstones, determining the ultimate shape of all their diamonds by preforming each stone in their cutting house. Stephen also competed in numerous American Gem Trade Association competitions, winning many coveted Cutting Edge Awards.

Still, he never faceted a Red Emerald before, so we began with the smallest of the three. From a 10.8 carat rough, Stephen fashioned a fierce 1.62 carat stone. *The Brilliant Princess* is actually an Emerald Cut modified beyond the typical proportional range, appearing somewhat square as a Princess Cut might be, but with blunted corners more resistant to damage. The gem was named for its intended owner, not the cutting style. This jewel was the first gemstone created because I exist.

Our second attempt with the 11.1 carat was met with additional success, producing the 3.51 carat Red Cross.







The Red Cross

3.51 carat Emerald Cut

9.65 x 6.5 x 6.0 millimeter

### **The Australian Connection**

Above:

**18K Yellow Gold Ring** 

**Emerald Cut Stone** 

7.8 x 5.8 millimeter

1.15 carat

The first one carat I acquired was not from production but purchase. Five months after the moment I knew about the Red Emerald, I saw the 1.15 carat gem that would be my ring. I acquired a few dozen facets, but all under half a carat. I was thrilled at the opportunity to possess such a large example of this natural wonder. I felt owning the jewel was like receiving the first dollar as a business -- an initial victory of a long mission -- a proud symbol and daily reminder of something I would have dreamed to achieve on my own.

My one carat initially looked lifeless, but almost every Red Emerald "plays dead" trapped inside a gem jar. Included stones should be bathed in high doses of natural light to bring them to life. The second I released my prize, a crimson flame burst into existence. I believed in the Red Emerald from the beginning due to its rarity, but this example was the first to reveal her beauty. Other mid- to low-grade gems were similarly stimulated by these conditions; those moments confirmed my long-standing faith in this precious gemstone.

I encountered my first Red Emerald while researching for a Master's Degree in Queensland, Australia. I intended to collaborate with an American jeweler on the rough plan to make the first major work of art in this gem variety, but a professor suggested I meet Ben Tracy, a local Aussie retailer whose reputation was rumored to be "pretty good". This was an understatement.

Ben manufactured and repaired numerous historic jewelry pieces while employed at *Garrard's & Company of London*, the crown jewelers of the British Royal Family for over a century. Mr. Tracy was one of three Master Craftsmen responsible for fabricating the *Heart of the Ocean* sapphire necklace famously portrayed as a blue diamond in the movie *Titanic*.

The process of developing proficiency in any original ability is fraught with the errors and mistakes of inexperience. Even an amateur may do well with the best materials, but I challenged myself to make "regular" jewelry from average quality materials first to learn and potentially avoid future tragedies.

Left:

The Red Cross Tension Setting Natural Light

Below and Right:

Gem Cabochon Heart 18K Gold/Platinum 0.56 carat



0.45 ct Heart Pair 0.86 ct Pear Pair 1.31 tcw



### **The Cabochon**

One detriment to priceless rarity is an inability of supply to completely service market demand for those who understandably long to own such a precious gemstone. Most Red Emeralds are imperfect, but gemstones under my care do not need to be perfect; I desire only to see them become as beautiful as possible. The scratches, dings and battle scars inside these gem bodies existed for the entirety of their 18 million year old lives, and these natural features are physical evidence of the hardships all must endure in the fight to shine.

One novel solution was to take material unsuitable for faceting and specimen display, using this rough to create stunning rounded and polished stones which present the appealing patterns inside a crystal. Cabochons are versatile and durable for use in jewelry applications. Approximately 80% of all red beryl mineral rough is cabochon grade, but their total supply is still far scarcer than all other precious gems.

#### The Red Dalmatian

Every cushion cabochon created was scoured to source the largest stones which also displayed strong gem sectioning. The visuals in this 22" Matinee Necklace spiral towards the bottom, where an uncommon patchwork pattern is showcased. Set in 3.5 ounces of 18K white gold, The Red Dalmatian represents the finest Wah-Wah Cabochon cushion necklace which could possibly be fabricated using the materials available today.



The largest cabochon is an oval 40 carats In weight, inferring an original crystal over 100 carats in size!



This would be twice the mass of the biggest free-floating Prism shown in the Red Emerald Black Album specimen lineup.





### Collection

#### The Purple Pearl

A double-strand with over 200 carats of cabochon pearls is held together by a vintage Baden & Foss 14K white gold clasp from the 1940s, whose middle row has been replaced with 2.5 millimeter Red Emeralds, surrounded by original diamond melee. The Purple Pearl is prominently placed in the center of the inside string, and features a coloration unique among all other cabochons, due to an intense violet tint which even pigmented inclusions in the stone.

Cabochon inventory is more extensive than faceted material, and this line was developed as a proof of that concept. My concentration remained focused primarily on acquisition and retention, dipping into the supply only to fabricate the best possible pieces. The Wah-Wah Cabochon jewelry shown here includes some of the greatest layouts which may ever be produced.

Even when a crystal is fully-included and opaque, the color of this gem material is particularly unique. The rich and luscious purple-red hues from the Wah-Wah Mountains have few true comparables in the gem world. Turquoise is a light-colored gem with an intruding dark matrix, and red beryl is a dark gem interrupted by white rhyolite patterns which leave the gemstone's purity of color undisturbed.

Left (Opposite Page):

As part of our initial fabrication efforts, Mr. Tracy placed a dozen square cabochon stones in stylish sterling silver settings to demonstrate the natural red beryl aesthetics.



Below:

Occasionally, when shaping a cabochon, all intrusive material can be removed, leaving a rounded stone completely comprised of gem material, like this one carat Red Emerald gem cabochon set in hand-textured sterling silver.

### The Red

**Twin Triangle Ring** 

Platinum / 18K Yellow Gold

0.84 ct Red Emerald

0.66 ct Diamond

All colored gemstones must contain impurities. Additional components incorporated into a crystal structure distort the manner by which light passes through a gem body. The electrical charge of trapped metallic ions causes wavelengths in a single ray of light to be separated, redirected and/or absorbed. Only a portion of the full spectrum is returned to an observer, with visibility of different shades and hues affected by a stone's chemical composition. Without inclusions or atypical elements inside, a gem would have no color at all.

The tempered glass of a car windshield appears clear when one looks through while driving, but broken, shattered pieces take on a greenish-blue tint when viewed from the side. The ability to display two colors depending on viewing angle is a quality of transparent materials known as **Dichroism**. The strongly Red-Orange/Red-Purple dichroism of a Ruby was a tint unique among all gemstones, until the Red Emerald appeared with the same color!

The Red Emerald is the EXACT color of a Ruby, in the EXACT body of an Emerald. These colors mix depending the orientation of a gem inside a crystal and the faceting style.

A standardized color-grading system had never been established for Red Emerald. vendors instead relying with οn descriptions imprecise such ลร "Stoplight" and "Gooseberry" to describe the most desirable red-orange and redpurple hues, respectively. Rubies are sorted into five levels of saturation in each secondary hue, and Red Emeralds possess these same ten distinct shades of scarlet. The Red Emerald supply used to fabricate these pieces has been separated by color using practices common to the Ruby trade.

Below: Red Yogo Ring

0.78 ct Unenhanced Red Emerald 0.31 ct Unenhanced Yogo Sapphire 0.18 ct Diamond Platinum Right: Red Lightning Ring

14K White Gold 0.89 ct Red Emerald 0.50 ct Diamond

> Below Right: Purple Hues Ring

Rare Strong Purple Saturation 0.52 ct Red Emerald Platinum



Oval Ring

Platinum 2.01 ct Red Emerald 0.29 ct Diamond

C. C. H. C. K.

Below: Pink Barion Ring

0.79 ct Red Emerald Polished and Burnished Platinum



While "Cut" is typically considered the only component of gem value controlled by human hands, the combination of faceting AND a proper jewelry setting is required to fully showcase the exceptional capacity of any mineral variety. Rubies are often placed into gold settings, which accentuate the red color of a gem. American Emeralds can be complimented in the same way, with yellow light deepening a stone's tone by one to two shades.

Red Emerald formation occurs in harsh conditions typical of Type III gemstones, crystallizing in extremely small fissures under compression. Pneumatolytic pressure causes more inclusions to be incorporated into a mineral's structure, but this greater number of impurities is also responsible for the intense saturation exhibited only by the green and red members of the beryl family.

Left: Red, White and Blue Ring

Platinum / 18K Gold Prongs 0.36 ct Red Emerald 0.25 ct Benitoite 0.14 ct Diamond

#### Ribbon Ring

14K White Gold 1.05 ct Red Emerald Pink vs Red Saturation

### **The Scarlet Pendants**

To reduce the appearance of inclusions, over 99% of all Red Emeralds have been enhanced with some type of liquid, whether oil, Opticon or ExCel. The Gemological Institute of America stated the ideal emerald enhancement should "*hide fissures, flow into fractures, hold up over time and be removable*" (JCK Magazine - June 2007).

The ExCel polymer fills any imperfections, hardening as far into the stone as liquid penetrates, effectively sealing surface fissures which may exist, and allowing for greater visibility into a stone. An added benefit of this action is increased gem stability, which considerably reduces the risk of future damage. Any Emerald which undergoes the ExCel process may be easily restored to its original state and comes with a lifetime guarantee for their completely reversible enhancement services. 18K Yellow Gold Red-Orange Secondary Hue Unenhanced Head and Body

1.04 ct Unenhanced Red Emerald

1.63 tcw

The Fox

Cherry Negative

18K White / Yellow Gold Color-Matched Marquise 1.58 tcw Red Emerald 8.01 ct Colombian Emerald

### **The Group Effort**

Red Emerald crystals are anhydrous and fewer fissures exist which are capable of transporting a liquid enhancement medium. Also, many fractures observed in Red Emeralds are often rehealed. Enhancement of a Red Emerald is usually certified as minor to moderate.

Once captured with high-resolution photography, pictures which display the natural features and inclusions in a Red Emerald serve as undeniable proof of its natural origin. The texture of each stone is identifiable, uniaue and absolutely differentiating a specific gem from all others. These patterns also become familiar to an owner over time, and a person can actually become acquainted with the "face" of their Red Emerald!

Like Pink Diamonds, Red Emeralds are usually very small, with over 90% of faceted stones weighing less than 1/10th of a carat. Detailed records maintained by the Kennecott Mining Company during mechanized operations reveal cut stone distribution,

#### **Red Flower Totem**

Pendant and Earring Set 18K Yellow Gold 1.80 tcw Red Emerald 0.75 tcw Benitoite

#### Chalcedony Art Deco Necklace

An unfinished art deco necklace from the 1920's has been restored and completed in 18K white and yellow gold, with precious metal tubing affixing Green and Red Emerald rounds to the vintage chalcedony center in each link. This piece features multiple high-quality examples of color varieties in the chalcedony family, utilizing green chrysoprase, red carnelian, black onyx and white chalcedony.

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proving faceted stones become exponentially more rare with size. There are likely far less than 1,000 one carat stones which have been cut to date.

Red Emerald is not as dense as Diamond, meaning a Red Emerald weighing 7/10th of a carat is the same volume as a one carat Diamond. Still, so few 3/4 carat gemstones exist that only a single person per seventeen million could own one. A certain claim stated Red Emeralds are so uncommon most would never get the chance to see one in real life, although I intend to change that dreadful fate for all who want to witness.

### **The Custom Work**



#### Top, Left:

Helix Inclusion in Pear 0.40 carat 6.5 x 4.0 millimeter

Top, Right:

Helix Pear in Platinum **Raspberry Color** Red-Purple 3/5 Saturation

Below, Left:

**Fifteen Pendant Pink Color** Red-Purple 1/5 Saturation

Below, Right:

**Fifteen Ring Stoplight Red Color** Red-Orange 5/5 Saturation





I receive regular requests to supply gemstones to the market, but I prefer to refer most potential customers to suppliers with a financial motive to assist. However, I do occasionally honor appeals which come from those who are romantically inspired. I cannot in good conscience deny someone engaged in a quest so similar to my own!

Everything on this page was sold to clients who gave the jewelry to someone they love. Just as everyone has their own taste for the company they keep, each of the ten hues of Red Emerald attract different people. Light orange-red examples are available in hues similar to well-known Padparadscha pigments. The light purple-reds appear as vibrant in color as the most heavily-saturated Pink Diamonds. Red Emeralds are 35 times more rare, but can be purchased at a more affordable cost!

### **Benitoite**



Not even a million faceted carats of Red Emerald are estimated to exist in total, and less than 5% of the world supply has been mined to date. The National Jeweler's Association named Red Emerald the "Rarest Gemstone in the World" in 2006. Prior to this declaration, the scarcest stone on the planet was considered Benitoite, a bright blue stone produced from only one location in the United States. The small area in San Benito County, California where material was first reported in 1907 remains the only place where gem quality Benitoite has ever been found.

When scientists established a system for classifying minerals, they were left with a theoretical crystal class which had never been observed in nature. Like the Red Emerald, Benitoite is part of the Hexagonal Crystal System, but their naturally-occurring mineral forms fit the Ditrigonal Dipyramidal class so well, their name became synonymous with that type of crystal structure.

The infrequent appearance of natural conditions required for Benitoite development led to its designation as a Type II gemstone under the Gemological Institute of America's clarity classification system. A Type II gemstone is expected to have the same level of inclusions as an unheated Sapphire, but the extreme rarity of this variety permits a greater tolerance of these natural features.

The color and refractive index of Benitoite is very close to Sapphire, although Benitoite is unresponsive to extreme temperatures. Unlike Sapphire, the clarity and color of a Benitoite will not improve through heat treatment of ordinary blue stones. This characteristic immunity provides buyers with the assurance all examples are unenhanced in a completely natural state. Rarely, colorless Benitoite crystals can also form; a White Benitoite transforms into a bright orange if subjected to high temperature.

Benitoite fluoresces under short-wave ultraviolet light, which means they glow like neon signs when exposed to black light conditions. Benitoite is a true champion of radiance, with a greater ability to disperse light than diamond. Benitoite also has a high specific gravity, making it more dense than diamond, although not nearly as hard. A one carat Benitoite is smaller than a one carat diamond and gems are difficult to obtain in sizes which appear large.

Today's customer wants to know everything about their gemstone from the time it was recovered at the mine to the moment of purchase. An Origin Report from a gemological laboratory provides an expert opinion on the country where a gemstone was found. Tracing a stone to its locality proves authenticity and ethical production. Fortunately, Benitoite and Red Emerald each come from a single source in America, alleviating any of these concerns.

Above: Benitoite Pear Pendant

endant

18K Yellow Gold 0.34 ct Red Emerald 0.32 ct Benitoite Below: American Ovals Pendant

> Platinum 0.22 ct Red Emerald 0.39 ct Benitoite 0.14 ct Diamond

### The California State Gemstone

Benitoite Flower Pendant 18K Yellow Gold 0.50 ct Red Emerald

0.19 ct Benitoite

US Pyramid Pendant 18K Yellow Gold 0.49 ct Red Emerald

0.16 ct Benitoite

The unique gemological attributes of Benitoite helped it become the state gemstone of California in 1985. In Santa Ana, at the West Coast Gem & Mineral Show in November 2015, I encountered a 9.12 carat Benitoite, a stone never offered on the open market before. The largest Benitoite is only 15 carats, and I had never witnessed such a sizable example.

Since its discovery 75 years earlier, the fourth-largest faceted Benitoite remained hidden in the private collections of the mine owners. Ed Swoboda originally found the rough crystal which shaped this gem back in the late 1930s. The specimen was stored uncut until the start of World War II, when faceted into an Emerald cut stone. Swoboda kept the gem until the late 1990s, when it passed to the new mine owner and renowned faceter Elvis "Buzz" Grey.

Many Californians appreciated this prize example from their state, and those who spotted the fascinating gem complimented the piece. Many strained for a closer look in an effort to catch a glimpse of a genuine, historic jewel. The example was not noteworthy for brilliance, but scattered blue light in a humming glow. While inspecting flawless stones, one searches in the hope there will be nothing to see. For colored gemstones, inclusions create nature's finest paintings. I was able not only to hunt, but also found layered detail in a rich, cerulean landscape larger than virtually every other example of this variety on Earth.

The presence of this gemstone was absolutely breathtaking. An Emerald cut is a non-traditional choice for this variety, but this faceting style is often used to showcase inclusions. Rocking the body caused a field of rainbow feathers to appear, and dozens of arcing flashes filled with every color twinkled like numerous tiny lighthouses, each operating independently in a great blue sea. The lapidary responsible for this masterpiece expertly placed these natural wonders in perfect suspension.

Twice as many Red Diamonds have been found than Benitoite in this size. Though a great responsibility, I would ensure this one would get to LIVE by placing it in a work of art.

The Liberty Line Pendant

18K Yellow Gold 0.31 ct Red Emerald 0.25 ct Benitoite Hero Pendant

18K Yellow Gold 0.40 ct Red Emerald 0.24 ct Benitoite



### **An American Rose**

The Union of our national flag is defined as a blue field with white stars. I knew this sparkling Benitoite would work perfectly as my California heart in an All-American statement piece. I sorted melee by color for months to separate 3.75 carat of red stones with top saturation.

From a rectangular blue field with star-like inclusions in the Benitoite, thirteen red and white lines unfold from the center, with over 250 stones individually-set in Platinum and 18K Rose Gold. The thirteenth line is hidden, traveling in a continuous eye-shaped circuit around the Benitoite, elevating the platinum center above the scarlet petals. Line 13 is composed completely of magenta melee (medium red saturation with strongly purple secondary hue), matching the upper and lower marguise pair which echo the contours of the larger platform. The versatility of Red Emerald color is on display, and two distinct crimson hues can be visually differentiated.

An American Rose **Early Schematics** Jewelry CAD Blueprints





An American Rose was unveiled under the "Shades of Blue" theme at the Tucson Gem and Mineral Show in 2016. An American Rose is fabricated using important examples in two of Earth's scarcest and most irreplaceable gem varieties, both sourced exclusively by the United States, making this an impossibly rare and extraordinary National Treasure.





### Pezzottaite





From Above, to the Right and Down:

Kotlowski's Transformation from nearly 300 carats of rough to a 60 carat gem.

Diamond famously utilizes carbon atoms in its crystal lattice, but Emeralds are formed on a molecular foundation of beryllium. A second location for gemquality Red Emerald was thought to be discovered in Madagascar in November 2002. Upon closer inspection, scientists determined the pegmatite deposit where the crystals were found lacked sufficient beryllium to form. To make up for this deficiency, crystals were able to utilize cesium atoms in place of beryllium. This alteration made the material a cesium-analogue of beryl, a closely-related but entirely new species belonging to the beryl group, subsequently named Pezzottaite after the Italian discoverer, Dr. Frederico Pezzotta.

Cesium appears to modify the natural hexagonal crystal shape of beryl, forming instead as a trigonal crystal, often with beveling at terminations and displaying a preference to form six-sided tabular crystals with three long and three short sides. While a closer relative to the Red Emerald, Pezzottaite crystals are sometimes more similar in appearance to the mineral form of Benitoite!

Compared to Red Emerald, four times as much Pezzottaite exists above ground, but the entire deposit has been depleted, making Pezzottaite more rare in terms of total supply on Earth. Local miners exhausted the only mineral deposit shortly after discovery, and less than 100 pounds of gem-quality rough was produced. Since Pezzottaite was only found in one location, this represents the total supply of the world. The largest stones which exist today are likely to be the largest stones which will ever exist.

One of the biggest crystals discovered during Dr. Pezzotta's original 2002-3 expedition was a 293.9 carat specimen publicly auctioned at Bonham's in 2008. I came across this rough at the Tucson Gem & Mineral Show in 2015. I saw a deep glowing light inside, indicating the presence of a brilliant gemstone. The piece was acquired and Stephen Kotlowski was commissioned to facet.

Only three examples over fifty carat existed, but Mr. Kotlowski was able to cut a stone larger than sixty! I referred to his trillion-shaped masterpiece as the Heart of Fire. Though this gem was technically priceless, I received a purchase offer for this and the Red Cross. Typically, I am averse to private sales of that kind, but I recognized an opportunity to trade those two jewels for a stash of Pezzottaite rough crystals in the market. The entire line of Pezzottaite jewelry fabricated to date was made possible by this exchange.





after preforming to get a good shape and to remove most imperfections





### **The Emerald Step-Child of Madagascar**

Pezzottaite lacks the intense crimson saturation observed in the finest Red Emeralds, but the dichroism in Pezzottaite is very strong. Like all dichroic gemstones, two color hues (strong pinkish-purple with pinkish-orange dichroism) can be seen in a single Pezzottaite gem as it turns in the light. Stones colored by Manganese are typically Magenta. Although both are primarily tinted by Manganese, additional metallic ions not present in Pezzottaite make the Red Emerald color deeper and ruby-like. As two members of the beryl group, the close family relationship between Red Emeralds and Pezzottaite allows for phenomenally beautiful color matching when using lightly-saturated red-orange Emerald hues.

#### Right:

Pezzottaite Pendant 18K White Gold 0.455 tcw Red Emerald 8.21 ct Pezzottaite Faceted by Brett Kosnar Unenhanced

#### Below:

Pezzottaite Fire Ring 0.31 tcw Red Emerald 3.35 ct Pezzottaite 0.85 tcw Diamond 18K White Gold





### **The Heart of Hearts**

Selling the Heart of Fire to obtain the market supply of Pezzottaite rough was somewhat of a risk -- Many production dreams die on the cutting wheel.

However, Mr. Kotlowski believed the shape of a highly-crystalline 110.44 carat piece of newly-acquired rough (one of the biggest from Dr. Pezzotta's second expedition in 2003) could result in the largest Pezzottaite ever created. I accepted the opinion of a supremely-gifted faceter, and with an extremely clever cutting design, Stephen finished this 65 carat heart in September 2015, only weeks before his untimely passing. The stone took over 20 hours to cut with many additional days required for polishing and enhancement.

A Rose Cut is an Old World faceting style developed in the 17th century before modern techniques were available, with the pavilion or underside of a gemstone formed using a large, flat bottom. Utilizing a modified Rose design allows either side to be displayed attractively. To accentuate this versatility, The Heart of Hearts is set in a reversible platinum pendant, giving the piece an ability to be worn in two different ways.

The "Table Side" offers a large viewing window to see through the transparent stone, with observable color affected by the wardrobe or skin behind the pendant. The high-quality Red Emerald trillion pair stacked in the gold center of the bail above mirrors the basic triangular geometry of the heart underneath. The presentation is cleanly separated and framed by diamond melee.

The "Checkerboard Side" shows off a domed pavilion where tubular inclusions catch light from different angles to add diffusion into the stone, while reflections from the flat table on the reverse cause rolling brilliance to flow throughout this piece. Red Emerald melee was hand-selected to match natural Pezzottaite tones and color-graduated in two framing lines which grow and fade in intensity around the centerpiece. The bail again reflects the form of the heart below, with matched Red Emerald melee creating the appearance of a rounded raspberry, a nod to the Pezzottaite nickname "Raspberyl".

The Heart of Hearts was scanned and modeled in 3D to precision-fabricate the platinum surround and laser-welded into place. Construction took over eight months and used a precious gemstone that is now and will forever be one of the largest Pezzottaite in existence, along with 226 additional stones, presented in the most impressive jewelry piece ever fabricated from this gem variety, unquestionably one of the world's rarest.



Platinum / 18K Rose Gold Bail 65.47 ct Pezzottaite 3.83 tcw Red Emerald (qty 126) 1.25 tcw Diamond (qty 100)

### **The Princess Collection**

Unlike Diamonds and other flawless gemstones, there is no ideal cut for an Emerald. Faceters must work around the unique inclusions and fissures inside, so small modifications to shape must be permitted. Not only are two Red Emeralds difficult to match in terms of color, but a lack of calibration makes placing similar sizes together an additional challenge.

15.87 carats of Red Emerald in 169 matching princess-cut stones are surrounded by 608 round melee diamonds, for a total of 777 gems in the necklace. Set in platinum, these jewels create a fiery piece unlike any other work on Earth, with a laser line of crimson that burns with an eternal fire at every turn.

A 0.59 carat Red Emerald princess ring is surrounded by 98 round melee diamonds in 14K white gold architecture, for a total of 875 gemstones in this collection. Hand-setting so many jewels is a labor of love, and this unprecedented composition stunned onlookers in the Red Emerald educational booth during the 2018 Tucson Gem and Mineral Show.

Princess Ring

14K White Gold 0.59 ct Red Emerald 1.93 tcw Diamond (qty 98)

#### Princess Necklace

Platinum 15.87 tcw Red Emerald (qty 169) 5.69 tcw Diamond (qty 608)

A princess cut is a square-shaped faceting style which comes to a point at each corner. Every stone with full saturation and exceptional clarity was put together for this unparalleled necklace, representing nearly the entire top-quality princess supply.

### **The Color-Drop Necklace**



#### **Color-Drop Necklace**

18K Yellow and White Gold 20.15 tcw Red Emerald (qty 45) 5.16 ct Gem Cabochon Teardrop A concert of pear shapes crescendo in color from light hues near the clasp falling into the darkest tones at the bottom, where they encounter a massive crimson droplet, underneath a similarly-shaped diamond pear accent.

The impossibly large 5.16 carat Red Emerald gem cabochon is the focal point of The Color-Drop Necklace, which features more than twenty carats of the finest Red Emerald stones set in 18K white and yellow gold with 2.5 millimeter diamonds separating the pear pairs. Everv teardrop-shaped stone in mv inventory was matched, and only the highest-quality couples were gathered for construction of this one-of-a-kind artistic wonder, a supreme composition which cannot be duplicated.

The pairs are arranged by colorgraduation, with lightly-saturated colors appearing to deepen as the necklace descends into heavy and deep scarlet, but in the low light of the evening, all these examples burn in crimson. The central jewel in this necklace rests as one of the largest gem-quality Red Emeralds known, glowering with unreserved elegance.

### **The Red Emerald Suite Treasure**





Some gemstones are known by their locale, such as the Australian Opal, the Burmese Ruby or the South African Diamond. The consumer needs no statement passed through a legislature to realize the Emerald is identified with Colombia. Similarly, the Red Emerald is only produced in America and fits the definition of a National Gemstone.

Featuring three stones larger than five carats, two with matching proportions, along with 1/2 carat oval and emerald lines displaying the finest clarity and color, *The Red Emerald Suite Treasure* is the greatest collection ever assembled for this incomparable natural rarity both in terms of size and quality.

Nothing ever assembled by the whole of combined humanity before can compete by weight, color or clarity. The Red Emerald Suite Treasure weighs over 65 carats, ensuring the wearer will be more impressively-decorated by Red Emeralds than anyone who has ever lived. 65 carats represents more than 1/4% of the entire above-ground supply. Better than 1% of the 1%, *The Red Emerald Suite Treasure* literally represents 25% of the top 1% of Red Emeralds on Earth!!!

Hand-fabricated in America to the highest standards of excellence by Alan Ladd of Fine Edge Woodworking, the stylish jewel box patterning of the Treasure Chest is marked with a red bloodwood inlay contrasted against a jet-black ebony trim. Each component rests in its individually-tailored chamber of the custom crafted interior. The Treasure Chest is sealed by a seamless magnetic latch when closed and held open with durable torsion hinges while on display. Measuring twelve inches long, ten inches wide and three inches tall, the readily-perceptible preeminence of this solid and substantial wooden wonder hints at the unimaginable value of riches within.

### **The Treasure Bracelet**

Fewer than 1% of Red Emeralds are a half-carat in size or larger, and less than 5% of those stones display top color and clarity. A bracelet containing 21 half-carat Red Emeralds was once billed as "the finest suite of American gemstones in a piece of jewelry in the world." The Treasure Bracelet takes this concept and increases that number of Red Emeralds by one-third.

At seven-and-a-half inches long, the *Treasure Bracelet* is filled with twentyeight Red Emeralds weighing a total of 14.03 carat, set manually in platinum and separated by 28 diamond baguettes weighing 81 points with VS clarity and ranging from G to I in color.

With the most crystalline quality and averaging over half a carat in size, these emerald-cut gems were collected over a number of years and represent the highest excellence attainable by this gem species.

While alone this bracelet might have been recognized as the greatest collection of American gemstones in a single piece of jewelry, this superior bracelet is only the first component of *The Red Emerald Suite Treasure*.





### **A Necklace of the Finest Water**

#### **Red Emerald Oval Necklace**

Platinum / 18K Yellow Gold 27.35 tcw Red Emerald (qty 56) 14.00 tcw Diamond (qty 56)

Likely the finest quality line ever gathered, these fifty-six halfcarat Red Emeralds are complimented by fifty-six quarter-carat diamonds sourced from Krementz stock in 1997. The diamonds appear VS in clarity, E to F in color.

This stunning, irreplaceable, eighteen-inch long necklace is hand-made in platinum with 18 karat yellow gold cradles for the Red Emeralds. As with green emeralds, the reds have a range of secondary hues, various saturation levels and tones, uneven color distribution with occasional zoning. As mentioned preciously, without a large inventory impossibly difficult to obtain, these natural features make the task of finding even two Red Emeralds similar in appearance incredibly challenging...much less twice as many as the bracelet!

56 ovals of phenomenal color and clarity are matched in a size attained by less than 1/2 of one percent of Red Emerald facets, for a total weight of 27.35 carat -- approximately one-thousandth of the above-ground supply.





## Series at Left: Starfire Emerald Chatoyancy Increasing Intensity of Flame

Right:

Starfire Emerald on White Magenta Flicker of a Flame

Ronald Ringsrud wrote in his definitive work on Emeralds that the "Fascination and wonder which accompanies the discovery of new knowledge...is exactly the proper use of science: to lead us to amazement of Nature's creation and to experience a sense of wonder. There is no better place to rediscover wonder than in [the] remarkable phenomenon that occurs deep inside the finest Emeralds."

No stone embodies this experience more than *The Starfire Emerald*, a 5.76 carat Red Emerald oval in a platinum ring. This mixed-cut gem is masterfully and meticulously hand-set with 80 points of fine diamond melee and features a faceted top with rounded pavilion. This cutting style accentuates attractive features in the uncommon Comet Tail pattern on display in the jardin.

Oriented in a spray layout as one would a Demantoid Horsetail, the fibrous inclusions rage like a fire. The curved bottom allows light to better travel along fibrous needles inside the gem, transmitting multi-colored chatoyancy at various angles, adding mystique and splendor to this massive stone, complimenting the already impressive undulating light return seen throughout the piece.

#### The Starfire Emerald

Platinum Ring 5.76 carat Red Emerald Ova 0.80 tow Diamond Accents

### Emerald

Starfire Emerald worn with the Treasure Bracelet

The Red Emerald Suite Treasure the first three Red contains Emeralds larger than five carats documented in the public record. Never has a precious stone variety been able to preserve their very first, absolute best examples; there is no original sapphire, oldest ruby or first diamond. No comparable exists in any gem species; these are the only inaugural five carat stones conserved in history. The discovery of Red Emerald in the modern era has allowed for this once-in-a-world occurrence.

Top Right: Simmering Jardin

> Right: Backlit Clarity









### **The Comet-Tail**



The very first crystal produced a record-breaking 5.39 carat monster measuring 10.57 x 10.03 millimeter. Another piece of rough I acquired weighing 24.24 carat was cut by Stephen Kotlowski to yield an unenhanced 5.79 carat stone with 10.43 x 10.34 millimeter dimensions.

Both shared similar proportions in size by sheer happenstance, making them not only the heaviest two, but also the biggest pair on the planet! The extreme improbability of such an occurrence has not allowed me to find any analogous incident in the gemstone industry.

History's first pair of Red Emeralds weighing over five carat each, the largest known set in the world, were entrusted to the expert care of Ben Tracy. Two months were dedicated to design and color sorting, followed by 150 hours handcrafting this impressive representation in 30.8 grams of 950 platinum by Mr. Tracy himself.

#### Below:

Above:

Early Design Sketches and Initial Stone Layout







### **Earrings**

Each stunning piece measures two and a half inches in length. Over this distance, the hand-selected accent stones show off the full range of color available to this remarkable variety. From a cherry red head begin the light red-orange tones which twist into fire-engine hues at the rounds. Bright magenta gems sit above the massive center-stones while fully-saturated reds rest below.

*The Comet-Tail Earrings* are the most impressive piece of Red Emerald jewelry in history -- one so magnificent nobody should ignore this new precious gemstone any longer. This is something never achieved before, and as the first largest Red Emeralds, this act can never be repeated. These monumental jewels will stand as an accomplishment forever.

#### **The Comet-Tail Earrings**

Platinum Left: 5.39 carat Right: 5.79 carat (Unenhanced) 7.29 carat Accent Stones

#### 18.47 Total Carat Weight

At the Tucson Gem and Mineral Show in 2017, "Mineral Treasures of the Midwest", Ronald Ringsrud saw The Comet-Tail Earrings on display and exclaimed, "Those earrings look like something Cleopatra would have worn!"

"I did tell my jeweler I wanted the style to be 'Modern Egyptian'," I replied, "so...you're actually not too far off!"

"You could always tell what kind of a person a man thinks you are by the earrings he gives you."

~ Holly Golightly

### **The Waterfall Bracelet**

The jewelry projects shown on these final two pages illustrate The Future Plan I have in mind for the Red Emerald.

Platform

The Waterfall Bracelet is a design concept to utilize a 5.15 carat Red Emerald, along with the entire available supply of baguettes.

I imagine each of the rectangular stones as a tiny red raindrop, spilling down the length of the piece and lightening in color as they cascade toward the bottom. The simulated appearance of a stunning crimson waterfall would give anyone an excuse to sit and watch these waves in wonder, knowing they are unlike any others in the world!

The five carat stone will rest on a platinum platform at the top, and completion of this project will result in a jewelry collection consisting of an unprecedented FIVE Red Emerald gemstones greater than five carat!





### **The Crown of Fire**



After discovery of the Red Emerald, I realized everything I loved in this world was created by someone else, but now I had the power to create a great work others could love, for hundreds if not potentially thousands of years. My original plan to create Earth's Finest Red Emerald Jewelry was envisioned as *The Crown of Fire*.

The design would require over a pound of platinum (the noblest of all metals) and use nearly 1% of the entire above-ground Red Emerald supply.

#### Left:

Initial Layout of the Heart Center, along with early color-sorting of melee used in flame construction

Below and Bottom Right:

Paper and Computer Assisted Design Models for The Crown of Fire





This humongous volume would ensure no one could ever create a piece of Red Emerald jewelry MORE impressive than this.

The crown uses a clasp in the back to convert into a heart-shaped necklace. Several noteworthy stones have been set aside, including the largest known faceted Red Emerald heart (2.1 carat) and pear (3.73 carat). These two could be removed from the overall piece and worn as a one-of-akind world class pendant. The headdress would serve as a one-piece jewelry suite, featuring a removable bracelet, earrings and choker, as well.

Ben Tracy began this project in Australia, but production delays and fabrication issues hindered completion. Finances dedicated to the Crown were diverted after the five carat pair was acquired and used instead to construct the *Comet-Tail Earrings*.

I underestimated the time and effort necessary to complete such an endeavor. While on temporary hiatus, this dream of the Queen is never far from my mind.



W. E. Wilson, author for the Mineralogical Record, while describing Red Beryl specimens at the 1991 Denver show, claimed that "to see these in the bright Colorado sunlight is almost a religious experience." My goal is to provide that same exhilarating feeling by presenting breathtaking Red Emerald jewelry in unprecedented sizes and quality never achieved by the whole of humanity before, demonstrating the full glory of this precious gemstone.

Constraints of supply blessed me as the one of the few designers who will ever have complete access to the rarest color palette on Earth. By creating art from this jewel, I am obligated by a sacred responsibility to be good. I strive to accomplish my very best for everyone on this planet today and those yet to come. I am motivated by a duty to honor you and this irreplaceable Red Emerald material, an undeniable gift from God.

My sincerest hope is that you enjoy it, love it and **MARVEL** at one of the wonders of the modern world.

Your friend,

Seth William Rozendaal

www.TheRedEmerald.com