

AU NATUREL

The Lotus Gold™ Gemstone Report

The vast majority of gems traded today have been enhanced to improve their appearance. On rare occasions, precious stones are found which require nothing to reveal their beauty, save for ordinary cutting and polishing. These gems are entirely *au naturel*. The Lotus Gold report is in honor of, and exclusively reserved for, these exquisitely rare, completely unenhanced gems.

5.55_{ct}

Natural Spinel
Myanmar (Burma)

Report N° 1048-4393
13 December 2019



LABORATORY FINDINGS

13 December 2019

01

Item

One unmounted stone

05

Color

Daylight Hue **Pink**
Saturation **Rich**
Tone **Medium-Light**

02

Weight

5.55 carats

06

Shape

Antique Cushion

03

Dimensions

10.10 x 9.13 x 7.33 mm

07

Cutting Style

Faceted
Crown **Brilliant**
Pavilion **Step**

04

Transparency

Transparent

08

Enhancements

**No indications of heating/
treatment**

This report is a professional opinion based on the results of a series of scientific tests, coupled with the combined decades of experience of Lotus gemologists.

NATURAL SPINEL

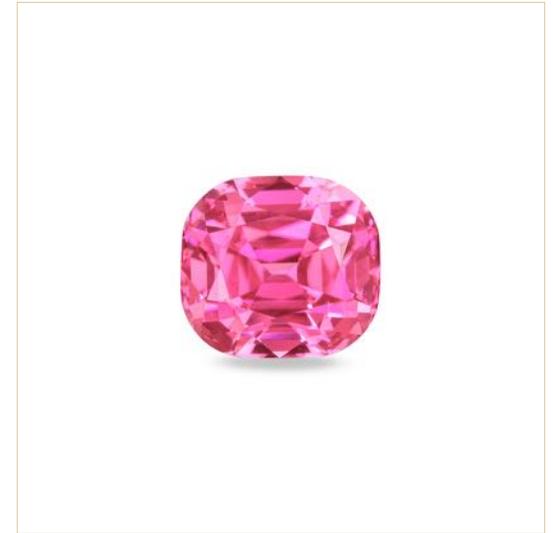
Report No. 1048-4393

Identity → **Natural Spinel**

Origin

Myanmar (Burma)

Since ancient times Myanmar's Mogok Stone Tract has produced gems of extraordinary quality, including some of the finest rubies, sapphires and spinels in the world.



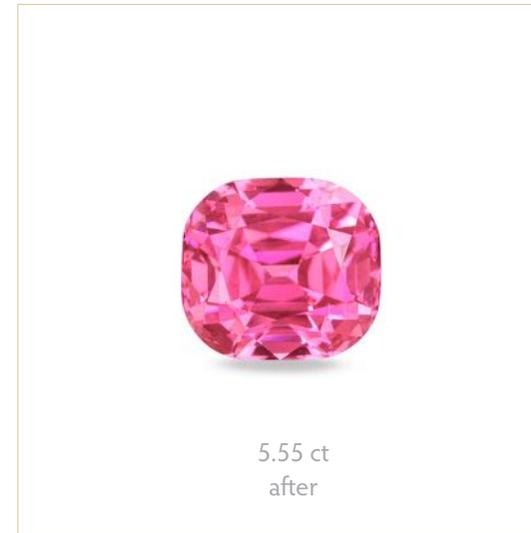
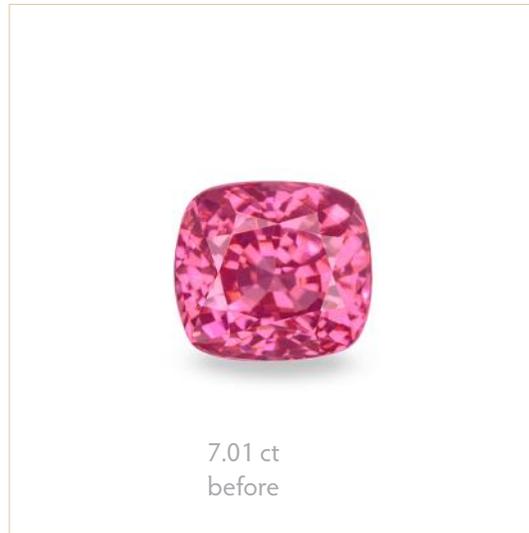
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A lapidary's art. From the rough, a gem is uncovered.

CUTTING EDGE

Report No. 1048-4393



IN EACH FINE piece of gem rough, there is a jewel waiting to emerge. It takes an experienced eye to see the material's potential, coupled with an artist's hand to realize the most beautiful finished stone.

After careful study, the lapidary defines the gem's essential shape by creating a "preform." This is the most critical stage as it sets not just the orientation in terms of color, but also relative to inclusions. Mistakes at this stage can be extremely costly. The final step involves grinding and polishing individual facets, bringing forth both hue and luster. In modern times some even opt to re-cut faceted stone, as lapidaries seek greater precision and beauty in their craft. This often entails a sacrifice, trading a higher weight to maximize aesthetics.

The subject of this report was recut from its previous size of 10.49 x 9.49 x 8.15 mm to its current 10.10 x 9.13 x 7.33 mm dimensions.

ORIGIN MYANMAR

land of spinels



WHILE THE BURMESE refer to Myanmar as the “Golden Land,” for the rest of the world, this realm is cloaked in an entirely different color – red. For when it comes to crimson stones, Myanmar’s Mogok Stone Tract reigns supreme.

Since time immemorial, some of the world’s finest rubies, sapphires and spinels have been clawed, scraped and sieved from the gravels, muds, rocks and caverns of Mogok’s jungled valleys and hills.

Lying approximately 650 km north of Yangon (Rangoon), Mogok is an area steeped in legend. As one writer put it more than a century ago:

Far away in a remote corner of the Earth is a town of mushroom growth, called Mogok.... It has but one industry, the recovery of rubies from mud and sand. You may be ever so hungry or thirsty, the first things offered or mentioned to you are rubies. No matter what business may have brought you to Mogok, the natives all assume you are there for rubies – rubies, nothing but rubies.... It is said that a king would be ruling at Mandalay today if it had not been for rubies...

Mogok is not Burma’s only gem locality. Fine hot pink spinels have also been found at Nanyaseik.

Valley of Spinel. Left: Kyatpyin and Pingu Taung in Burma’s Mogok Stone Tract.



ON SPINEL

balas ruby and more...

THROUGHOUT MOST OF RECORDED HISTORY, ruby has been the world's most valuable gem. But what few people are aware of is that most famous rubies are not ruby at all, but "balas rubies"—red spinels. This includes the Black Prince's and Timur "rubies."

The most famous source of spinel in ancient times was at Kuh-i-Lal, in what is now Tajikistan. This is the original source of the balas ruby and such was its fame that it was even mentioned in Marco Polo's travels.



Not just red. Spinel comes in a variety of colors, as this superb collection from Vietnam demonstrates.

Today, the most famous locality is Burma's Mogok Stone Tract, which, in addition to pigeon's blood rubies, also produces some of the world's finest red, pink and orange spinels. Namya in Burma's Kachin State also yields gorgeous hot pink gems.

The Burmese term for spinel is *anyan*. In the Mogok Stone Tract, spinel crystals are found that are so perfect and lustrous that they appear to have been polished by the gods. These are termed *anyan nat twe* ('spirit polished').

Sri Lanka is another important source and the finest "cobalt blue" spinels have been found in the island's gem gravels. Rare stars and cat's eyes are also known.

Superb blue, violet and red spinels have also been found in northern Vietnam's Luc Yen district. Southern Madagascar is another important source of fine gem spinels.

In 2007, several massive red spinel crystals were unearthed in Tanzania's Mahenge region. These produced an incredible suite of stones all matched in color, a virtual king's ransom. This succeeded in further raising spinel's profile.

Today spinel stands proudly on its own, no longer in the shadow of ruby, but recognized for what it is—one of the planet's most beautiful, historical and valuable gems.



Spirit polished. Rough spinel from Mogok, entirely untouched by the lapidary's wheel.

ON COLOR

The sense of sight is indeed the highest bodily privilege, the purest physical pleasure, which man has derived from his creator.

– Sydney Smith

Perhaps no aspect of a precious stone's beauty is more subjective than that of color, which is why novices commonly ask: "What color is best." The correct answer is quite simple: "The best color is the one you find most attractive."

This is not what some want to hear. They yearn for a plot charting their way to heaven (à la diamond's D, E, F...), or a simple statement that "the color of this stone is better than that one" while not understanding that such a judgment is entirely arbitrary.

At Lotus, we appreciate the science of color, and willingly use it. But the notion that a faceted gem possesses a single "color" can be disproved by simple observation.

Faceted stones present a three-dimensional mosaic made up of myriad colors, some bright, some dark, some intense and others dull. Each of these colors changes the moment the eye, gem or light moves. Thus to truly describe the appearance of a faceted gem, one would have to describe hundreds of colors, depending on the light source, viewing angle, background and even the size of the viewer's head (which blocks some light). In essence, gems are like miniature paintings with light as the brush on a canvas that formed millions of years before.

The colors of gems are better described in general terms for the simple reason that increasing specificity implies some higher knowledge of what an individual finds attractive and despite our best efforts, we are still not mind readers. Similar to the appreciation of fine art, one cannot exclude the feelings, experiences and sensibilities of the judge.

As a result, Lotus color descriptions are of a dual nature, expressing both scientific rigor (hue position, tone, saturation) and artistic flair. But we do not attempt to suggest one color is more attractive than another. That is a judgment that only the buyer can and should make.



Painting with light. Instead of asking what color I am, why not ask if you find my palette pleasing?

CLARIFYING CLARITY

CLARITY REPRESENTS one of the most difficult and simultaneously simple concepts involved with the assessment of precious stones. Gemology books will tell you clarity is judged by the size, number, color, position and nature of inclusions. Obviously there are an infinite number of possibilities.

Allow us to simplify. Inclusions that weaken a gem are the least desirable. This includes cleavages, fissures, cracks – any form of break that might expand with time. Spinel is quite tough, so a shallow break is not so bad, but one should be careful with those that penetrate deeply into a gem.

And the rest? Let's reduce them to a single word – Distraction. The more distracting an inclusion, the more it hurts a gem. Imagine a picture of a smiling man or woman. A missing tooth at the back of the mouth is no problem; a missing front lower tooth is less desirable. The worst would be a missing top front tooth.

Gems are no different. When you evaluate a prospective purchase for clarity, concentrate on the distraction level. You can live with inclusions that are difficult to see. Those that are instantly obvious will probably fail your distraction test.

One final note on clarity. Unlike diamonds, the clarity of spinels is always judged with the naked eye.

Frozen Time. A foreign crystal trapped within the depths of a Burmese spinel.

ON PRICES

spinel in the marketplace



THOUSANDS OF TIMES more rare than diamond, spinel is among the world's most expensive gems. But like all gem materials, it is found in a number of qualities and across a large range of prices.

Historically, spinel prices are about a tenth the price of ruby, but since 2005, we have seen values skyrocket, with the finest spinel gems today selling for US\$20,000/ct or more. The highest prices are generally paid for red and blue gems, but spinel occurs in so many colors that collectors should not overlook the other hues, which have a charm and beauty all their own.

The highest recorded price ever paid for spinel jewelry was for an Imperial Mughal necklace containing 11 polished beads with Mughal inscriptions. It sold in 2011 for a princely US\$5,214,348, clearly demonstrating that spinel is no longer in the shadow of ruby.

Pink spinel from Mogok, Burma, in both natural and faceted forms.

Caring for your Treasure

GEMS ARE AMONG THE MOST durable of nature's creations, but still require care to retain their beauty. Caring for your jewelry is a matter of common sense and simple precaution:

- Always remove your jewelry when engaging in activities that risk impact or exposure to chemicals or heat such as sports or housework.
- Always put jewelry on after using lotions, cosmetics, hair spray or perfumes, not before.
- Never remove your jewelry by pulling on the gems.
- The best way to store jewelry is in the compartments of a jewelry box or in pouches. Store each piece of jewelry separately and necklaces flat so that harder stones don't scratch softer ones. Almost every gem is harder than the metal in which it is set. Gems can scratch one another or the finish on your jewelry if stored carelessly.
- Carefully wipe jewelry with a soft lint-free cloth after wearing to remove oils and salts.
- Clean your jewelry on occasion with a cleaning solution or mechanical cleaner suitable for the gem; use a dish rather than the sink, for if a gem accidentally falls out of the setting, down the drain it goes. When in doubt, just use warm soapy water and a soft toothbrush.
- Think twice before putting gems in an ultrasonic cleaner. Diamonds and rubies and sapphires are generally fine, but other gems may not be. When in doubt, leave it out.
- Opaque gems such as lapis lazuli, turquoise and malachite are porous and may absorb chemicals and soap, discoloring them. Thus they require special care. Never use ultrasonic cleaners, ammonia or chemical solutions. These gem materials should just be gently wiped clean with a moist cloth.
- Opals also require special care. Never use an ultrasonic, never use ammonia, and avoid heat and strong light that can dry out the water in opals.
- Due to their organic nature, gems like pearls, coral and amber are both soft and porous. Thus they should be simply wiped clean with a moist cloth. Be careful about chemicals in hairspray, cosmetics, or perfume; over time they can damage pearls in particular.
- Stones that have a Mohs hardness of 7 or less are subject to scratching; harder stones are less susceptible, but still subject to chipping and fracture.



When it comes to caring for your spinel jewelry, a bit of warm soapy water and a soft toothbrush is usually all that is needed. After cleaning, simply wipe it dry with a lint-free cloth.

ABOUT LOTUS

our philosophy

LOTUS GEMOLOGY BEGINS WITH a simple idea – beauty is the principle source of attraction for precious stones. Thus it should also be the major focus of gemology. In other words, the gem is the most important part of GEM•ology.

Founded by gemologists Richard Hughes, E. Billie Hughes and Wimon Manorotkul, Lotus operates from a base of over eighty years of collective experience in the study, purchase, sale and appreciation of precious stones. Over time, we have come to realize that gemology is not simply counting atoms. Science is a method of organizing knowledge such that it can be rationally explained and reliably tested. And yet today's science cannot accurately explain or test certain phenomena. Which rainbow is the prettiest, what painting speaks to you, which person do you find most attractive? These are personal choices that can never be reduced to a simple set of measurements, anymore than the beauty of a sunset can be expressed by formula.

Rest assured, we are not Luddites. We not only appreciate science, but also use it daily. At the same time, we recognize that many parts of the human experience extend into realms beyond the ability of science explain or test. Thus the gemology at Lotus is wide, including not just science, but weaves into the mix history, culture, art and travel. We do this in the belief that these factors play important roles in how humans perceive desirability and value.

Precious stones are among the most compelling examples of Mother Nature's artistic genius. Our lives have been enriched beyond measure by our involvement with these gifts of nature and we believe if we characterize them with the appropriate reverence and care, we can open this magical world to others. This is our goal. The translation of the intangibles of rarity and aesthetic beauty is our strength.

Finally, like a small French restaurant, we believe that crafting a fine meal takes time and individual care; thus our seating is limited. But we are confident the result will be something special, just like these precious treasures we have the pleasure of working with.

SUBSTANCE

the lotus oeuvre

WITH OVER 80 years of collective experience, the Lotus team has authored more than 160 papers on various aspects of gemology. We did not simply write the book on ruby, sapphire and spinel, we wrote the books, a collective body of work unsurpassed on the subject. In addition, we have designed, authored and edited other books on precious stones.



TERMS OF REFERENCE

Important Notes

limitations

LOTUS GEMOLOGY CO. LTD. provides its gem reports for a relatively small fee only because they are subject to the following liability limitations:

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- Each report contains a description of the article tested based upon tests and techniques used by Lotus at the time of examination. Gemstones can be enhanced at any time after leaving our premises. If there are doubts about an item's current condition, please submit it for rechecking.

origin opinions

WHEN AND WHERE THE EVIDENCE warrants, Lotus issues an opinion regarding the probable geographic origin of the gem tested. Origin opinions are given solely at the discretion of Lotus. Clients should be aware that differences in opinion between one lab and another might arise. This is because the geologic conditions in one place sometimes overlap with similar conditions in other localities.

Even in laboratories possessing millions of dollars of equipment, the most important evidence for origin determination is generally collected via the simple gemological microscope. It is the experience of the gemologist with the microscope that largely determines the accuracy of origin reports.

In short, origin determination is not an exact science, and depends greatly on the experience of the individual gemologists doing the testing. The gemologists at Lotus have been involved with precious stones for many decades, including visits to many of the major deposit around the world.

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