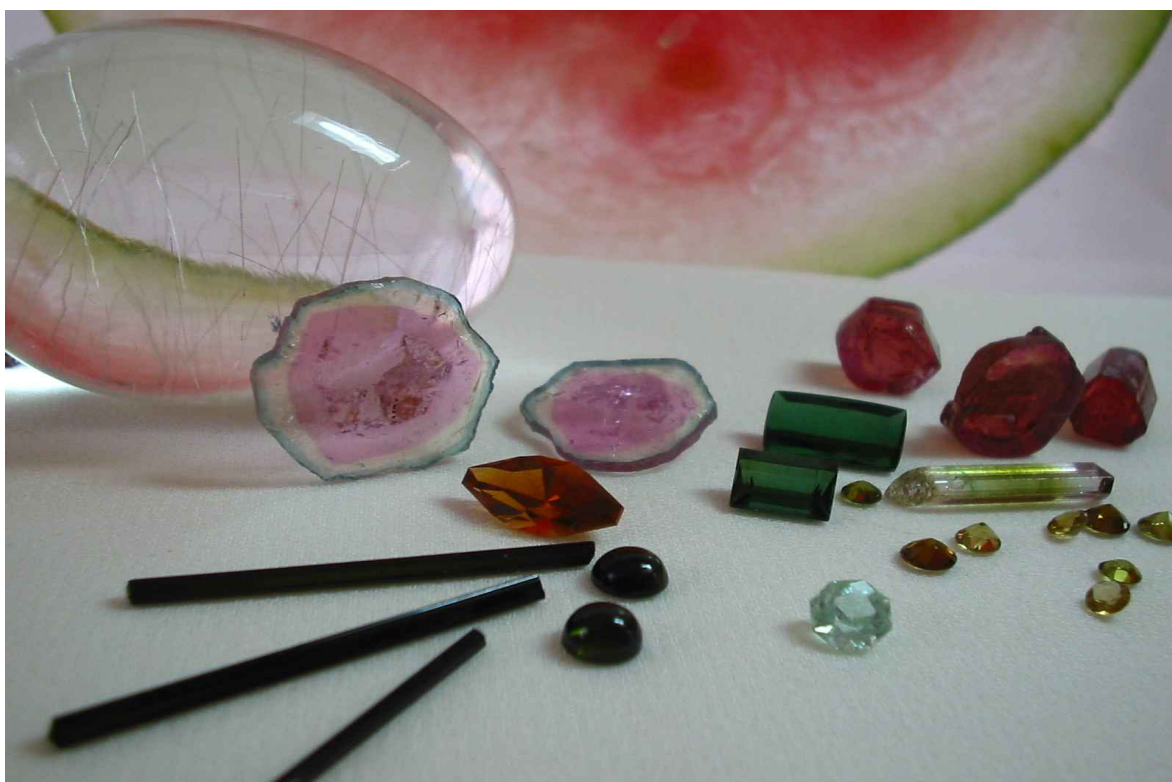


the
New Mexico

Facetor

May/June 2004



The Official Newsletter of the New Mexico Faceters Guild

NMFG

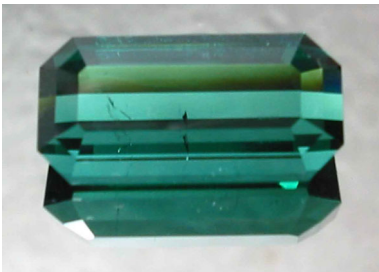
Show and Tell

Stunning "Cut Corner Mini Triangular Barion" in Chrome Diopside by **Carsten Brandt**. The gem weighs 0.66cts.



A 14.5 x 8mm emerald cut aquamarine from Mozambique by **Nancy Attaway**, set with 2mm accent Diamonds in a new bail design by **Steve Attaway**.

A variety of gorgeous tourmalines by **Nancy Attaway**. To the right is a fantastic blue liddicoatite, followed by another very long, fabulous green tourmaline (34mm x 9.5mm) from Nigeria.



Finally, two matching 16 x 7mm emerald cut Nigerian bi-colored tourmalines with sparkling pavilions from a barion-like pavilion and culet.



The New Mexico Faceters Guild

Guild Officers 2004-2005

President: Dylan Houtman
Vice President/Programs: Ernie Hawes
Secretary/Treasurer: Bill and Ina Swantner
Guild Gemologist: Edna Anthony
Guild Mineralogist: Paul Hlava
Workshop Chairman: Ernie Hawes

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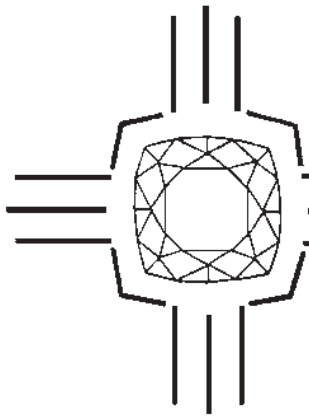
Purpose of the Guild: The purpose of the New Mexico Faceters Guild is to bring together persons who are interested in faceting or faceted stones. We promote the art and science of faceting and provide a means of education and improvement in faceting skills. Finally, we provide a means of communication between those persons involved in or interested in faceting as a hobby.

Guild Membership: Dues are \$20.00 per calendar year (January through December) for newsletter issues sent by e-mail. Hard copies of newsletter issues sent by US mail are \$30. Please see the membership application/renewal form on the last page of the newsletter.

Meetings: The Guild meets now on the second Monday of odd numbered months at 7:00 p.m. at the New Mexico Museum of Natural History, 1801 Mountain Road N.W., Albuquerque, NM. Workshops are generally held in even-numbered months. Date, time, and place are given in newsletter. Also, any change in guild meeting times or dates will be listed in the newsletter.

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The next meeting of the New Mexico Faceters Guild will be July 12, 2004.



The New Mexico Facetor

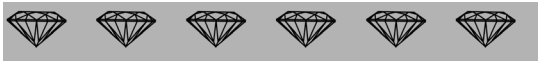
Volume 24, No. 3, May/June, 2004



NMFG President Dylan Houtman

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New Mexico Faceters Guild Official Website

We invite everyone to visit our website at: www.attawaygems.com/NMFG for interesting and informative articles on gemstones and faceting techniques.

The Prez Sez:

by Dylan Houtman

Hello.

I picked up three relatively rare pieces of faceting rough a few weeks ago, Leucite $K(AlSi_2O_6)$, Herderite $CaBePO_4(F,OH)$, and Phenakite Be_2SiO_4 . When I was roughing the Leucite with the 360 grit lap, there were great gouges and the edge of the stone showed curling shavings, which were still attached to the stone, as though I were cutting a piece of plexiglass. The 1200 grit lap left the stone looking like it didn't even need to be polished. I decided to try an Ultra-Lap with 0.5 micron diamond, and using very little pressure, achieved an excellent polish. The Herderite came in small round pre-forms, in champagne, lavender, and white color choices. This material cut beautifully in roughing and pre-polish. I tried an Ultra-Lap with cerium oxide to polish initially; I thought with a hardness of 5-5.5 Mohs about anything should work, but got nowhere. I switched to the 0.5 micron diamond Ultra-Lap and it did beautifully; Linde-A on a lead-tin or BATT lap would probably work, too. The Phenakite came in pre-forms as well: a marquise and a triangle. I haven't cut them yet, but the other beryllium silicates I have tried, cut and polished just fine. These materials were very expensive and only the Phenakite is hard enough for jewelry. If you can find them, try them anyway!

Happy Faceting,

Dylan



Minutes of the NMFG Meeting

May 10, 2004

by Nancy L. Attaway

Vice-President/Programs Ernie Hawes called the meeting to order at 7:10 pm and welcomed everyone to the meeting. President Dylan Houtman was ill and unable to attend tonight's meeting.

Old Business:

The Albuquerque Gem and Mineral Club sent **Nancy Attaway** an official Certificate of Appreciation to the New Mexico Faceters Guild for the faceting demonstrations and the special display seen at the Treasures of the Earth (March) 2004 Club Show. The certificate thanks the New Mexico Faceters Guild for its faceting demonstrations performed by **Dylan Houtman, Ernie Hawes, Scott Wilson, and Carsten Brandt**. The certificate also recognized the educational display on Montana sapphires assembled by **Scott Wilson and Steve and Nancy Attaway**. The New Mexico Faceters Guild has had a good relationship of long standing with the Albuquerque Gem and Mineral Club, and Guild members are always glad to participate in the club shows. Some Guild members are even dealers at the annual show.

Nancy Attaway announced that the obituary for **Merrill O. Murphy** appeared in the Albuquerque Journal on May 2, 2004. She praised **Ernie Hawes'** eloquent obituary for **Merrill O. Murphy** that appeared in the March/April 2004 issue of The New Mexico Faceter. In Ernie's words, the New Mexico Faceters Guild and the faceting community at large has indeed "lost a giant in the world of faceting". We will all miss Merrill. How fortunate we were to have been beneficiaries of his wisdom all these years.

Ernie Hawes reported on the Guild Workshop that he ran at the home of **Scott Wilson** in Corrales

on May 1. He said that a lot of faceting was accomplished, and that many faceting problems were addressed and solved.

New Business:

Paul Hlava, who has served for the last several years as Show Chairman for the Albuquerque Gem and Mineral Club shows, announced that the Treasures of the Earth 2005 Show is scheduled for March 18, 19, and 20. He said that he would like to step down as Show Chairman and just be Dealer Chairman.

Nancy Attaway announced that the next Guild Workshop is scheduled for June 19 at the Attaways' home in the East Mountains. A formal announcement will be e-mailed to Guild members in late May.

Program for June Meeting:

The next meeting is this coming Monday, July 12, 7 PM at the New Mexico Museum of Natural History. Our guest speaker is **Bob Hazeltine** who operates a jewelry school both here in Albuquerque and in Santa Fe. Everyone who's interested is also invited to join us for dinner at LaPlacita in Old Town at 5:30.

Refreshments:

Ernie Hawes baked yummy dark chocolate brownies, and **Nancy Attaway** baked a rich pound cake with cherries. Gourmet coffee was also served.

Thank you very much. **Elaine Weisman** and **Elaine Price** volunteered to bring refreshments to the meeting on July 12.

Show and Tell:

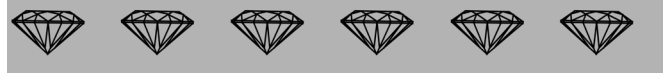
Ernie Hawes displayed a lovely small rhodolite garnet in his newest faceting design, "Whirligig", which appeared in the March/April, 2004 issue of The New Mexico Faceter. This design is slated to appear in an issue of Lapidary Journal this fall. Ernie

said that this stone is to be a present for his great-granddaughter.

Carsten Brandt displayed a gorgeous small triangular chrome diopside that he cut in the "Cut Corner Mini Triangular Barion". The rich green hue of chrome diopside is certainly worth the trouble of cutting it, as the gem can give a faceter problems during polishing.

Nancy Attaway displayed six stones that she recently faceted. She showed a 34mm x 9.5mm emerald cut (with step cuts) bright green tourmaline and two rich blue emerald cut (with step cuts) Nigerian tourmalines, one a 14.25 x 8.25mm and the other a 16 x 6mm. Nancy also showed three bi-colored emerald cut Nigerian tourmalines that exhibited bright pink and green hues. She cut the 16.5 x 6mm emerald cut bi-colored tourmaline with step cuts. The other two matching 16 x 7mm emerald cut bi-colored tourmalines had sparkling pavilions from a barion-like pavilion and culet. The matched pair was not intentional; Nancy said that she had to re-cut one to further eliminate some inclusions that interfered with the sparkle. Nancy related that a stress crack developed near one end of the fourth bi-colored tourmaline, the largest of the four crystals. Steve sawed off the end with the crack, and Nancy was in the process of re-cutting that stone. Nancy remarked that two of her most recent faceting designs, the "Trenchant Triangle" and the "Cushion Triangle for Liddicoatite", are to appear in *Lapidary Journal* this year.

Steve Attaway displayed two 14Kt. gold pendants that he cast with his new bail design. This bail design shows ten 1.5mm full cut diamonds set in the metal. One pendant with the new bail design held a 17 x 9mm emerald cut Nigerian rubellite tourmaline (liddicoatite), and the other held a 14.5 x 8mm emerald cut aquamarine from Mozambique. Both pendants had the emerald cut gems set vertically, with three 2mm diamonds set in a triangle at the bottom of each pendant.



Program Speaker

by Nancy Attaway

Phillip Rudd, diamond cutter and GIA-trained Gemologist, presented "Gemtrails of South America" to the New Mexico Faceters Guild. Phillip had traveled extensively in Brazil, British Guyana, and Venezuela. He related some of the very interesting experiences that surrounded his quest for diamond rough and colored gemstones. Phillip spent one month in Brazil ten years ago, and he spent three weeks exploring Venezuela and parts of British Guyana two years ago. He showed on various maps some of the places he visited. Phillip related that he had learned diamond cutting from a third generation diamond cutter from Holland.

Phillip began by discussing his travels in northern and southeastern Brazil in search of rough diamonds and gemstones. He related how he spent the first leg of his flight from Miami to South America in a crowded, oxygen-starved airplane for twelve hours. He asked the audience to imagine his surprise when the plane landed in a cow pasture in Paraguay. There, everyone switched planes for the flight to Rio de Janeiro. After landing in Rio, he settled comfortably in a nice hotel room on Copa Caba Beach. Phillip explained that a huge river basin dominates nearly 3/5 of Brazil's roaring landscape, and that some of the oldest rocks on the planet were found on the country's high plateaus.

Phillip explained that the two major gem and jewelry houses in Rio are H. Stern and Amsterdam Sauer, and that both operate global markets from their Rio locations. Both companies also give factory tours of their facilities and galleries, hosting prospective buyers of gems and jewelry in their swank showrooms. Phillip remarked that the gold jewelry offered for sale there exhibited excellent quality workmanship, but that their colored gemstones would have benefited from better attention to cutting and polishing. Phillip spent several days in Rio meeting people, exchanging money, and finalizing

further travel arrangements. He said that the people there were very pleasant and thought that the food was quite delicious.

From Rio, Phillip traveled to the large metropolitan center of Belo Horizonte, the state capital of Minas Gerais ("general mines" in Portuguese). Phillip said the plane flew over an escarpment that separates the mainland from the coastal areas, and that Belo Horizonte lies behind the escarpment that isolates it from the coast. Phillip remarked that Belo Horizonte is a major center of earth science and home to lapidary arts, both faceting and carving. He said that the area around Belo Horizonte holds over 30% of the world's iron reserves, as well as major deposits of gold, diamonds, manganese, and many types of gem mineralizations. He said that world-class mineral specimens had been unearthed from the area. Phillip noted that many gem dealers maintained offices in Belo Horizonte. He enjoyed visiting the city's various museums, galleries, and markets. Wanting to initially look for diamond rough, Phillip traveled by bus all day to Diamantina, a small town high in the mountains that lies north of Belo Horizonte. He remarked that the bus left for Diamantina at 2:00am and arrived there well after dark.

In providing a bit of history, Phillip explained that gold was first discovered in Ouro Preto, located south of Belo Horizonte, in the 1700's. He said that diamonds had been found in Ouro Preto in 1725, and that the diamond field there had once been ranked as the world's largest until the diamond deposits were found in Africa. Little in the way of diamonds is now unearthed in Ouro Preto; imperial precious topaz is currently the main gem deposit.

Phillip then related how his search for diamond rough in the area of Diamantina was done after breakfast in the local bar, where the main contact for diamond rough was a large, toothless dark-skinned man named Mother. Phillip remarked that primitive methods were still used to find diamonds, but that some trench work was said to be done back in the hills. He said that Diamantina was a rough

town, where many robberies occurred. He told us of a recent theft done by armed, bandana-wearing men on horseback who rode into town and took the diamonds from a prominent widow.

The diamond rough contact, "Mother", soon arranged for a guide who introduced Phillip to several diamond brokers and diamond cutting shops in town. Phillip said that he also met some of the small-time diamond miners in the same bar. Phillip explained how one of these miners, called *garimpeiros* ("little chickens" in Portuguese) would lean over the bar and remove diamond crystals from his mouth one by one. Phillip said that he purchased diamond rough until he was sick of losing money. He then left Diamantina for Belo Horizonte to catch a flight to Teofilo Otoni.

The beautiful town of Teofilo Otoni, the lapidary capital of Brazil, is also known as a world class center for lapidary arts. Phillip said that the area's rock was very old and highly eroded, and that the pegmatites there were mined extensively. Phillip remarked that the very picturesque town of Teofilo Otoni sets beside a river in the mountains, lying northeast of Belo Horizonte. He also said that he found the best gem prices there.

Governador Valadares, just south of Teofilo Otoni, was Phillip's next stop. He said that there were rumors of large diamond mining claims and heard of active diamond mining in the area. While he was there, Phillip also heard rumors of diamonds being found in Uruguay. He said that the mining was both alluvial and illuvial and was mined from trenches; he was not aware of any pipes being developed. Phillip said that guides or commission agents would obtain for you the best prices in town for diamond rough. He met an English-speaking agent who also had an office in New York--this fellow was studying for his Graduate Gemologist certification. Phillip also met a person who had collected some of Brazil's finest treasures; this man showed him some alexandrites. Phillip told how he would sit in a park and wait for the dealers to come to him. If he was interested in what the dealer had to sell, he would

accompany him to a room in a large building nearby. He said that prices for diamond rough were marked wholesale for volume discounts only, and that stakeholders paid one half of what he paid in Brazil for diamond rough. He explained how he would look for trigons on diamond crystals, and would closely examine each crystal's transparency and color. Phillip noted that there were many large banks in the small town of Governador Valadares. He remarked that a policeman shadowed him during most of his trip. He also had the remarkable opportunity to see a two-pound coffee can filled with diamond crystals the size of hen's eggs!

Phillip then related stories of his travels to Venezuela. Phillip explained that tremendous mineral wealth has been discovered on the north coast of Venezuela, including oil, coal, and bauxite. He traveled to La Gran Sabana in southeast Venezuela and to British Guyana in search of more diamond rough. He said that gold and diamonds have been unearthed in British Guyana. He described the long, thick coal seams of the area, the bauxite and iron deposits, the gold nuggets, and the area's diamond deposits are nine to ten times more productive than Brazil's. Phillip traveled up the Orinoco River, known as the River of Darkness, the third largest river in South America. On the east side of the river lie more deposits of gold nuggets and diamonds. Phillip described the tremendous waterfalls and the vast grasslands that he saw. He mentioned that primitive mining methods were still used to extract diamonds in British Guyana. Phillip explained that the main pipe from where the diamonds originate has not yet been located, though very knowledgeable people have traveled to Brazil's interior and across the expanse of land to British Guyana in search of the elusive mother lode. Its location remains a mystery to this day. He said the GIA speculates that the diamonds were brought up a pipe by an exhalation of carbon dioxide gas.

In comparison with the trip to Brazil, Phillip described his trip to Venezuela and British Guyana as dangerous, especially traveling on the Orinoco River. He said that often the people he dealt with

there were disreputable. He was advised by veteran travelers to carry a big handgun while there. Phillip did find a lot of diamonds while he was there. He described the green skin from natural radiation that was peculiar to the diamonds from that region. He said that the green skin sometimes masks the true color of the diamonds, but that the diamonds were usually clear, clean, and very high quality. Some even showed fancy colors.

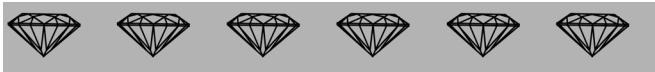
Phillip used the services of an import agent for all of his buying trips for diamond rough. He remarked how easy these official agents made the transportation of goods. The agents charged a small fee, and hardly any taxes were levied on diamond rough. Phillip still advised being very careful with money and parcels of rough; he said that carrying contraband was not necessary, and it was wise to always remain with the agent.

Phillip entertained many questions from the audience, including questions about diamond orientation and how to locate the grains of a diamond. Phillip graciously explained some aspects of diamond cutting to the Guild. He said that diamonds usually form as octahedrons, and that the outside diameter determines the yield in carat weight. Phillip said to measure the largest diameter of a crystal. He advised against buying any coated stones, as these may be opaque. Instead, he said to look for sawable stones. Phillip stressed how important it was to be able to recognize what can be cut from a piece of diamond rough. He said that he uses a cast iron lap for diamond cutting. He attached the diamond rough to brass dops (with points) with a special glue, a plastic-wax glue used for dopping diamonds. Phillip uses a 500-pound mill that is free of vibrations--very heavy equipment. He said that used diamond cutting equipment can run between \$3,500 and \$5,000 and may run up to \$10,000 for new. Such equipment is very specialized and has a very narrow usage.

Phillip told us that most diamond cutters are factory cutters who specialize in just a few cutting designs, like rounds, because the market demands it. He related that the "Sharp" in a diamond cutting

house was the cutter who would brute or rough in each diamond crystal. Since this step establishes the actual girdle diameter, Phillip said that this made the Sharp the most important worker in a diamond cutting house. Phillip remarked that many factory diamond cutters do not know (or need to know) their diamond grains. The grains are the diamond's hardness directions on the crystal lattice. However, the better diamond cutters knew their diamond grains. Phillip found it very helpful to know these grains when buying diamond rough, as these determine the cutting systems. He described one grain as the rib between two octahedral faces. Phillip said that a diamond cannot be cut on an octahedral face, as that face equals a hardness of ten.

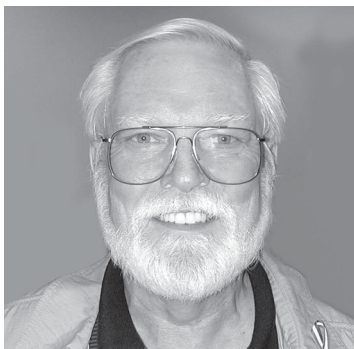
The New Mexico Faceters Guild thanks Phillip Rudd for his fascinating trip reports and for an interesting glimpse into diamond cutting.



Facet Designer's Workshop

By Ernie Hawes

Looking over the numerous designs that Dylan Houtman has given me, I've chosen two for this issue that are quite different from each other. The first is one that Dylan designed fairly early while he was just learning to use GemCad. He calls the design **Angst**, as he experienced quite a bit of angst as he was trying to get facets to meet and work together. I like this design because there aren't a lot of designs that are especially suited for dangly earrings. This one is. Of course, being a long slender pattern, the optical effect isn't going to be uniform throughout, but it does have a nice sparkle to it as it is moved around. And what faceter doesn't have pieces of rough that would result in a lot of waste if cut in a standard shape. Thus, designs that take advantage of odd shapes become especially desirable. This is



even more important if the odd shaped rough is expensive material. Personally, I have a rather long slender piece of beautiful flawless aquamarine that, with appropriate angle changes, would be great for this design.

The second design of Dylan's that I have chosen is really quite remarkable. It's called Montringle, a made up word by Dylan as a contraction of "Montana Triangle." Dylan created the design specifically for a piece of Montana sapphire, hence the name. Because Dylan had specified the design parameters to be for corundum, I thought it curious that the main angles were a bit different from the usual corundum angles. With Dylan's permission, I thought it would be interesting to see if a better set of angles could be calculated.

Although I have been designing for several years using GemCad and the other programs associated with it that Robert Strickland wrote, I haven't done much with BOG, the ray tracing optimizing software created by Tom Herbst to work with GemRay and Strickland's newer version, GemRayX. Here was my chance to give BOG a try.

Well, it turned out that I was a bit more naïve about this task than I first thought. I knew something was strange when BOG recommended pavilion mains above 46 degrees. The animation looked pretty good when run through GemFrame and GemFlick, but I wasn't convinced that I had done everything appropriately. Without going into a detailed discussion that would take far more space than this column allows, I had failed to enter all of the parameters I should have for BOG to properly do it's work. Fortunately, I was able to enlist the help of Philip Stonebrook, a faceter I know in Florida. Phil is an experienced user of BOG and an authorized beta tester for the next version of the program. With his help, I was able to select revised angles that worked really well.

When you review the ray tracing information for this design, you will immediately see some things that are different from what I usually include. First

of all, GemRayX produces four images instead of the usual three produced by GemRay. The fourth image shows the percentage of dispersion. In addition, there is a figure for the amount of scintillation the design yields. It is important to note that the COS and ISO percentages cannot be compared with those given when calculated by GemRay. GemRayX takes into account the reduction in light caused by the head shadow of the viewer. Consequently, the percentages are significantly lower. I mention this here just so anyone looking at the data will not make the mistake of thinking the numbers indicate that this design is not very bright. Quite the contrary, for a triangular cushion, the design is quite bright. What is even more significant is the scintillation percentage. Phil Stonebrook advised me that when he started working with this design, based on previous experience, he expected a much lower percentage. As most of us know, scintillation is a significant part of what gives a design beauty and personality. Without it, even the brightest design would have little else to make it interesting.

Some faceters won't even cut a triangular shaped design because of the tendency for dark corners. Obviously, this is not the case with Dylan's **Montringle**. While not as bright when cut in a lower RI material such as tourmaline, it still has considerable brightness throughout, and the scintillation continues to be remarkable. Of course, this design has pointed corners, which some jewelers object to because of the difficulty in setting. This issue can be overcome with appropriate prongs or other methods of setting, so I don't consider it to be a serious shortcoming. All things considered, **Montringle** is a design that has a lot going for it. Give it a try. You won't be disappointed.



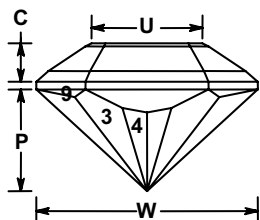
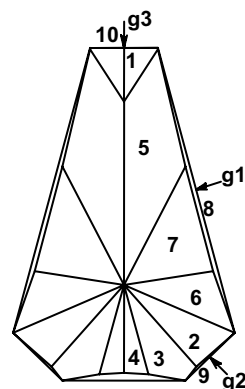
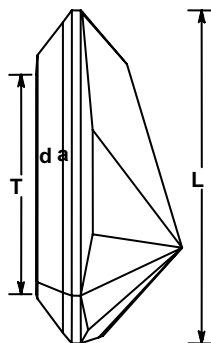
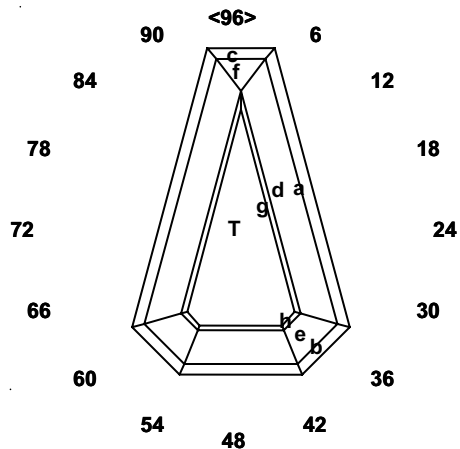
Faceters Guild Workshop

By Nancy Attaway

A Guild Workshop was held June 19 at the home of Steve and Nancy Attaway in the East Mountains. Folks arrived between 8:30am and 9:30am, and various discussions ensued over gourmet coffee and yummy baked goods. Nancy led a short classroom discussion that began around 10:30am.

She offered several handouts to faceters that covered faceting tips and cutting diagrams. In remembrance of Merrill O. Murphy, she made copies of two of Merrill's faceting diagrams, the "Tri Polar Cut" and the "Regal Barion Cushion Cut". She also made copies of the faceting diagram for the "Oval for G.G.G." and Dick Ochsner's faceting diagram of "M.O.M.'s Cut". Nancy had copies of her article on faceting tips, copies of Ernie's and her joint article on polishing laps and their recommended usage, copies of Dr. Jill Glass' article on fracture, copies of Doug Turet's article on tourmaline hardness and sensitivity, and copies of Steve Attaway's article on damage layers generated by grinding laps and grit size paradox. These articles contain very interesting and pertinent information for faceters to know and apply.

Afterwards, diamond cutter Phillip Rudd initiated a short discussion about how a faceting diagram is created. Nancy explained that she is usually motivated to create a new faceting design by a certain piece of gem rough that requires special attention. Sometimes, she has a certain shape in mind, draws the outline, cuts the girdle facets, and continues with the pavilion facets until completion of the stone. Then, Steve converts her notes and drawings into GemCad to properly arrange the diagram for publishing. Ernie said that he uses GemCad to design his faceting diagrams, and Dylan Houtman said that he uses GemCad to help work out his faceting



Angst

By Dylan Houtman

Angles for R.I. = 1.746

38 + 6 girdles = 44 facets

1-fold, mirror-image symmetry

96 index

$L/W = 1.509$ $T/W = 0.999$ $U/W = 0.502$

$P/W = 0.460$ $C/W = 0.168$

$Vol./W^3 = 0.320$

Average Brightness: COS = 33.3 % ISO = 48.7 %

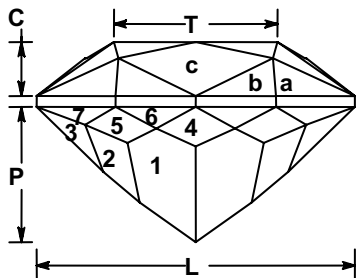
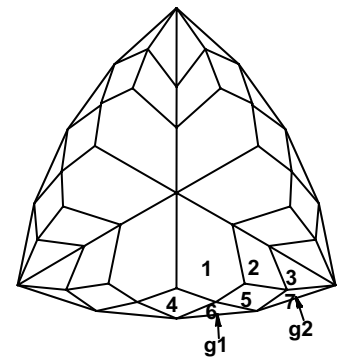
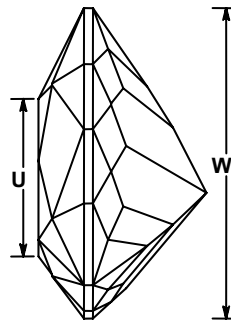
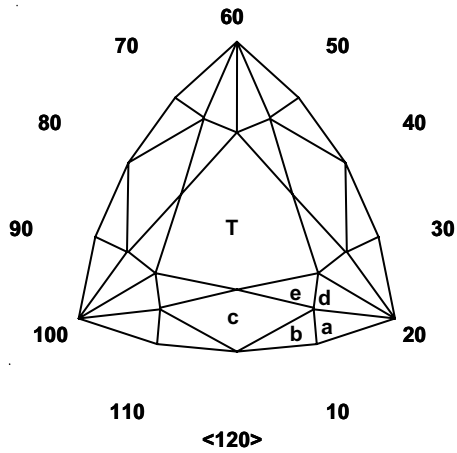


PAVILION

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4	42.00°	46-50
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6	44.54°	22-74
7	44.70°	20-76
8	70.00°	20-76
9	70.00°	36-48-60
10	70.00°	96
g1	90.00°	20-76
g2	90.00°	36-48-60
g3	90.00°	96

CROWN

a	42.00°	20-76
b	42.00°	36-48-60
c	42.00°	96
d	37.00°	20-76
e	37.00°	36-48-60
f	37.00°	96
g	22.00°	20-76
h	22.00°	36-48-60
T	00.00°	Table



Montringle

By Dylan Houtman

Angles for R.I. = 1.760

67 + 12 girdles = 79 facets

3-fold, mirror-image symmetry

120 index

L/W = 1.028 T/W = 0.524 U/W = 0.509

P/W = 0.366 C/W = 0.144

Vol./W³ = 0.172



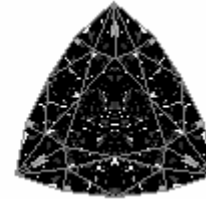
Random



COS = 48.5 %



ISO = 67.8 %



Dispersion = 8.8 %

Scintillation = 60.7 %

PAVILION

1	40.20°	002-038-042-078-082-118
2	40.20°	006-034-046-074-086-114
3	40.20°	009-031-049-071-089-111
4	47.20°	120-040-080
5	47.20°	004-036-044-076-084-116
6	55.30°	002-038-042-078-082-118
7	55.30°	006-034-046-074-086-114
g1	90.00°	002-038-042-078-082-118
g2	90.00°	006-034-046-074-086-114

CROWN

a	42.50°	006-034-046-074-086-114
b	41.80°	002-038-042-078-082-118
c	35.90°	120-040-080
d	28.00°	013-027-053-067-093-107
e	21.20°	004-036-044-076-084-116
T	00.00°	Table

designs during the cutting process. After that discussion, Nancy asked Ernie Hawes to report on his trip taken over Memorial Day Weekend to the Northwest Faceting Symposium.

Ernie related that many interesting talks about competition faceting, faceting tips, machine demonstrations, and GemCad were given by noted faceters. He was glad to have attended the symposium to meet and converse with so many nationally recognized faceters. Nancy remarked that faceters were certainly glad to have had Ernie at the symposium, as he is a well recognized designer of faceting diagrams.

Many activities occurred during the Guild Workshop. Steve Attaway demonstrated the benefits of using the polishing compounds from Mountain Mist Products in West Virginia, and he showed how well the compounds polished gemstones. Nancy said that she uses the polishing compounds on both her corian and ceramic polishing laps, in addition to using diamond spray. Steve then demonstrated how to use the new mold making compound from Cad Blu in New York, and he showed how quickly and easily it made molds from objects like buttons and plant leaves. Steve also showed how his Roland 3D axis milling machine made specific jewelry parts and custom designs that were molded to yield wax patterns and then cast. He and Nancy invited everyone to observe their casting operation, slated for later in the afternoon in their workshop.

Ernie Hawes, Dylan Houtman, Kevin Schwebel, and Carsten Brandt all brought their faceting machines and cut gemstones. Marc Price, Kevin Schwebel, Steve Attaway, and Ernie Hawes also discussed opals. Elaine Price obtained some wax

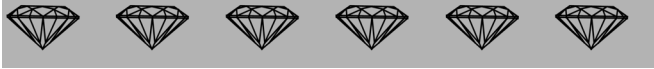
patterns from Steve's mold making expertise for her casting class at UNM. Scott Sucher visited the workshop to watch the casting operation. He brought his sixteen replicas of the world's famous diamonds that he cut years ago in cubic zirconia. Some of his replica diagrams appeared in several issues of Lapidary Journal. Everyone remarked on the beauty and the cutting of Scott's replicas.

Soon, it was time for lunch. Nancy had purchased bar-b-que beef brisket and pork loin from Rudy's, along with buns and hot sauce. She also served her spicy baked beans with garlic and green chili. Kevin Schwebel's wife made a delicious loaf of zucchini bread, Ernie brought yummy chocolate brownies, and Nancy baked a chocolate-cherry cake. The Prices brought grapes and sweet bread. Iced tea and fresh apricots were also on the table. Thank you all for contributing to the feast.



After lunch, Ernie, Dylan, Kevin, and Carsten continued to facet their stones. Ernie faceted a citrine, Dylan cut an amethyst, Kevin worked on a synthetic sapphire, and Carsten finished a golden-colored tourmaline. Carsten will bring his stone to the Guild meeting in July. A faceting break was taken around 3:00pm to watch the Attaways' casting operation. Everyone watching the casting process wore dark glasses to protect their eyes from the glare of the torch. Dylan, who has cast platinum, remarked on the process and noted the small flame used for casting gold, in comparison to a large flame required to melt platinum. He said that he also wore eye protection used by welders when casting platinum because of the high temperatures needed. The Attaways successfully cast seven flasks that afternoon. They will bring their finished pieces to the next Guild meeting.

The workshop evolved into a very busy day composed of a multitude of activities and discussions. A good time was had by all. The next Guild Workshop is scheduled for August 21 at the home of Steve and Nancy Attaway. See you there!



In the News

Blue Jade Found to be Omphacite

Source: Colored Stone May/June 2004

The material originally reported to be blue jade was determined by GIA to actually be omphacite. Omphacite is a solid solution of jadeite, augite, and aegirine, all members of the pyroxene mineral group. GIA reported that this find marks the first known occurrence of gem quality omphacite.

Consulting Gemologist Reginald F. Thompson explained that the first recorded blue jade location was in Asia around 1850, and that the next recorded discovery of blue jade was in California in the late 1950's. This blue jade is a nephrite jade. Only a few pieces of it were ever unearthed.

Tanzanite Prices Rising

Source: Colored Stone May/June 2004

The price of tanzanite has risen 30% in the last three months, from February of this year. Reports also stated that prices had risen up to 50% since the summer of 2003. Mining for tanzanite has become more complicated and expensive. The mines are getting deeper, and more of an investment in equipment is needed to extract the gem from those depths. Although the fine gem tanzanite (darker color) remains a good seller, demand for tanzanite may fall somewhat because of its current scarcity and high price. Since no new finds have been unearthed, tanzanite is expected to increase in price, especially for the fine quality gem material.

Pink Spinel Discovered in Tanzania

Source: Colored Stone May/June 2004

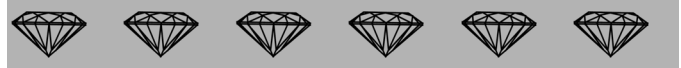
A new deposit of pink spinel was discovered in Tanzania late last year. According to Joseph Gil of Akiva Gil Company, Inc., the company marketing the new pink spinel, the pink color is all natural. The deposit is currently producing mostly small stones,

up to one carat cut, but a few larger ones have been found.

Non-destructive Method for Identifying Gemstone Origin

Source: Science News, Vol. 164, Dec 13, 2003

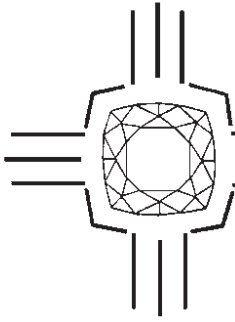
The origin of gemstones has been notoriously difficult to track but a recent development has made it possible to identify the country and even the mine a gemstone came from. Phillipe de Donato, a French scientist, presented this new technique at the December 2003 Materials Research Society meeting. De Donato has been able to discriminate between emeralds from ten different mines and seven countries, and also between synthetic and natural stones. His new method makes use of the fact that deuterium-oxygen bonds absorb specific wavelengths of infrared light. This non-destructive procedure produces an absorption spectrum which is characteristic of gemstones from certain locations. De Donato has obtained optical signatures of this type for a variety of emeralds; this method should resolve certain controversies surrounding historically important gemstones. Theoretically, this method should be applicable to any gemstone that contains water molecules.



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The New Mexico Facetors Guild

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