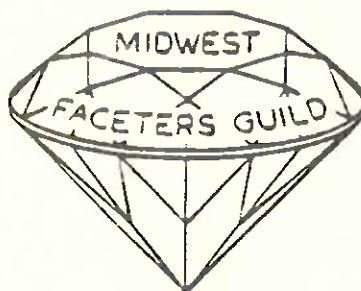


THE MIDWEST FACETER



VOLUME 11 NUMBER 4

1991

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THE MIDWEST FACETERS GUILD

ORGANIZED JULY 14, 1979

INCORPORATED 1979

BECAME A NON-PROFIT EDUCATIONAL ORGANIZATION - JULY 7, 1982

PURPOSES

1. To promote education **and** recreation.
2. To develop "THE ART OF FACETING".
3. To exchange information related to faceting.
4. To provide meetings for those of like interests.
5. To promote achievement in individuals.

MEMBER OF:

MIDWEST FEDERATION OF MINERALOGICAL and GEOLOGICAL SOCIETIES
THE AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES

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THE MIDWEST FACETER

How to order your MIDWEST FACETERS GUILD badge:

Send exact name you wish on the Badge
Along with \$5.75 and mail to:

A- FRAME AWARDS
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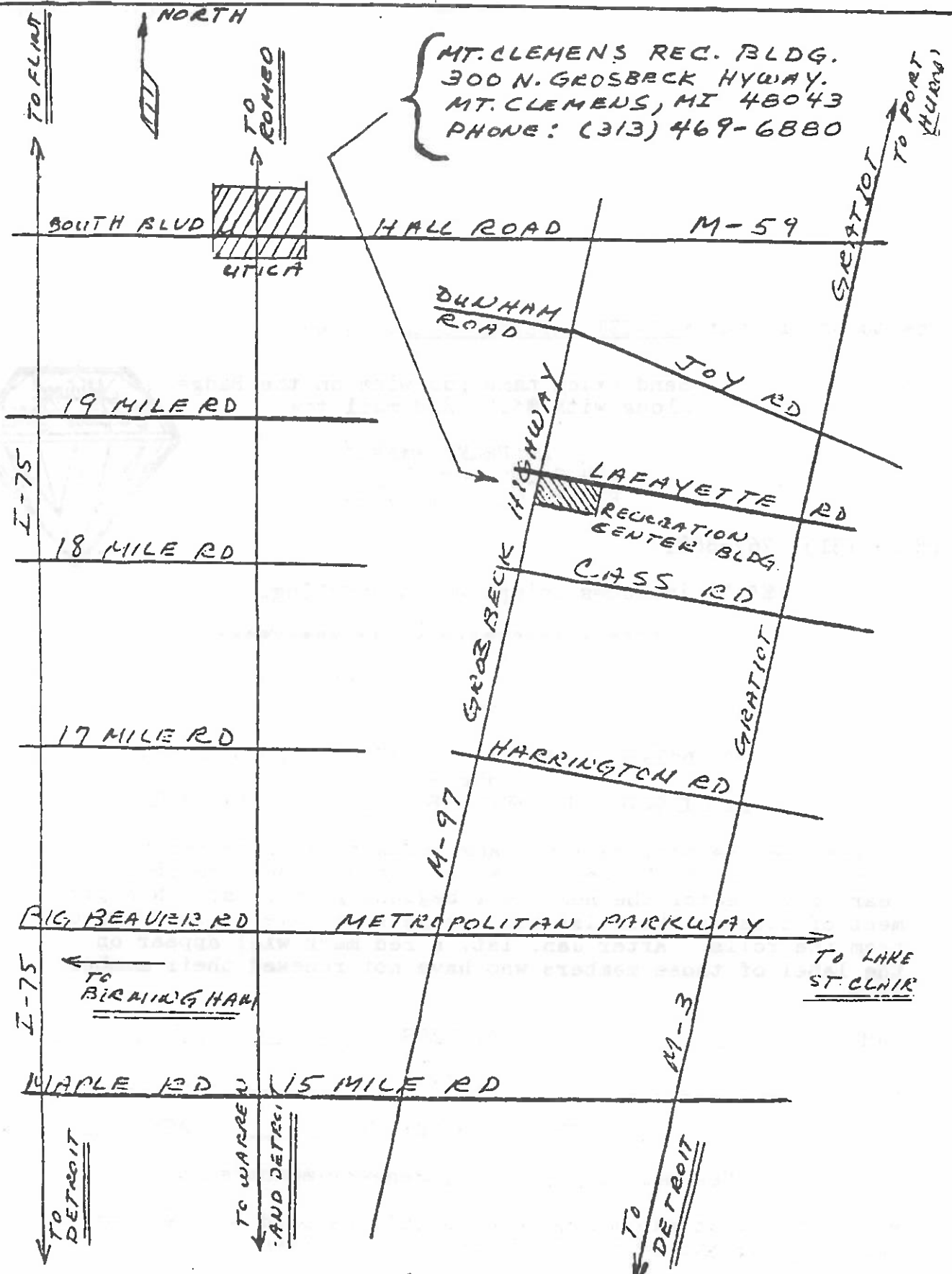
Please use the application blank below to join or renew your membership in the Midwest Faceters Guild. Dues are \$5.00 per year, payable for the next year beginning Oct. 1st. Non-payment of dues by April 1st will cause your name to be dropped from the rolls. After Jan. 1st, a red mark will appear on the label of those members who have not renewed their membership.

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☐ New membership ☐ Renewal membership

While it is not mandatory, dues should be paid by check when possible and mailed to the membership chairmen at:

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SEMINAR DIRECTIONS

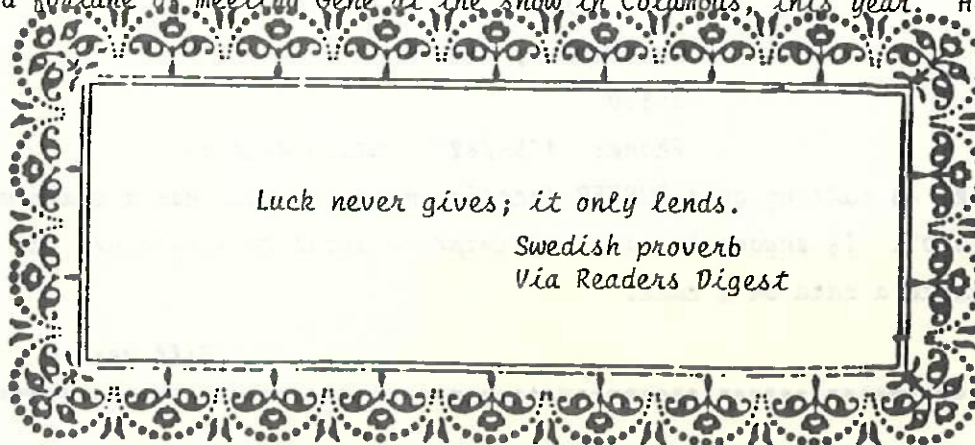


ONE MORE TIME !!!!!

The time has come once again, to host our "SEMINAR". I am refering to the Seminar as our second annual, as I sincerely hope that it will become an annual affair. I believe the Seminar, as a teaching media, is what we are all about. We should always be willing to share our knowledge and experience with others. This is the way that we have learned. I'm hopeful the Seminar grows each year. This year we will have Gerry Wycoff helping us in Class 1. He will be bringing with him a brand new machine and some very good knowledge. Plan on attending this Seminar if you possibly can. FACETING - FRIENDS - FACTS - FUN !!!!!!! These words by themselves spell exactly what our Seminar will be.

We are fortunate in this bulletin to have some diagrams from our peer group. Members who have designed some new and tantalizing diagrams. The "DIAMOND BOWTIE" was the winner of the American Gemcutters Society award for best new design for the year 1990. Alan Reigelman Jr. , is the designer. Alan lives in Mesa, Arizona. His wife is also a fine faceter. They both cut on an ultra Tech. Alan is the type of faceter who can cut a gem in just a few hours, and have cut it to the upper 90 percentile. He is a very fine cutter.

The second diagram comes from Gene Homan, of Columbus, Ohio. I had the good fortune of meeting Gene at the show in Columbus, this year. He is



a new member of the Guild. His diagram is "THE MINT-LEAF CUT". Try to cut these! We are very fortunate to have fellow faceters share their success with us. Happy cutting !!!!!

The Prez

SAN CARLOS TREASURES !

Last winter, I had the privledge to meet one Mr. Leo Stevens. Leo lives in San Carlos. I spent the better part of the day with Leo on the San Carlos Indian Reservation. I meet his family, visited at his home, and had a tour of the town. With Bill Langham, Ross Veeder, and Earl Netwal, I had the fun and excitment of digging for Perido at Leo's Peridot mine. Leo and Stacy Victor run the mine at San Carlos. I always thought Peridot could be found in the sand and dirt. Not so ! Digging for Perido is really big time hard work. The Peridot must be removed from Real Hard rock. Leo and Stacy blast the over burden host rock, and than it must be broken down to release the peridot. Leo and Stacy had about a dozen young men helping to get to the Peridot. Sometimes as the rock split open, the peridot would pour out like sand. The bigger pieces are very hard to come by.

The area is about twenty miles East of Globe , Arizona. It is in the moun- tains, and is very beautiful. The town itself, is very progressive. Everyone was very hospitable. The weather was at it's very best, with high skies and gentle breezes, and in the seventies for temperature. All in all, it was a very nice way to spend a day.

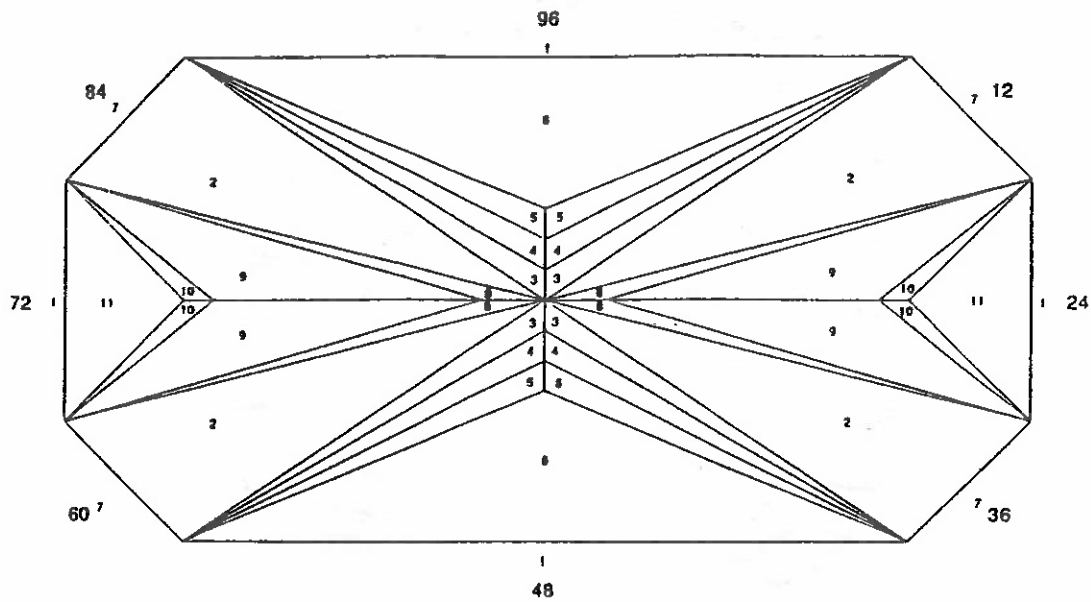
If you are interested in getting some Perido from either Leo or Stacy, write to this address:

Mr Leo Stevens
P.O. BOX 670
San Carlos, Arizona
85550
Phone: 475-2822 (Stacy Victor)

Leo is cutting on a CUSBER faceting machine, that has a plate marked "San Francisco". If anyone has any informantion about this machine, Leo would really appreciate a card or a call.

Bill Horton

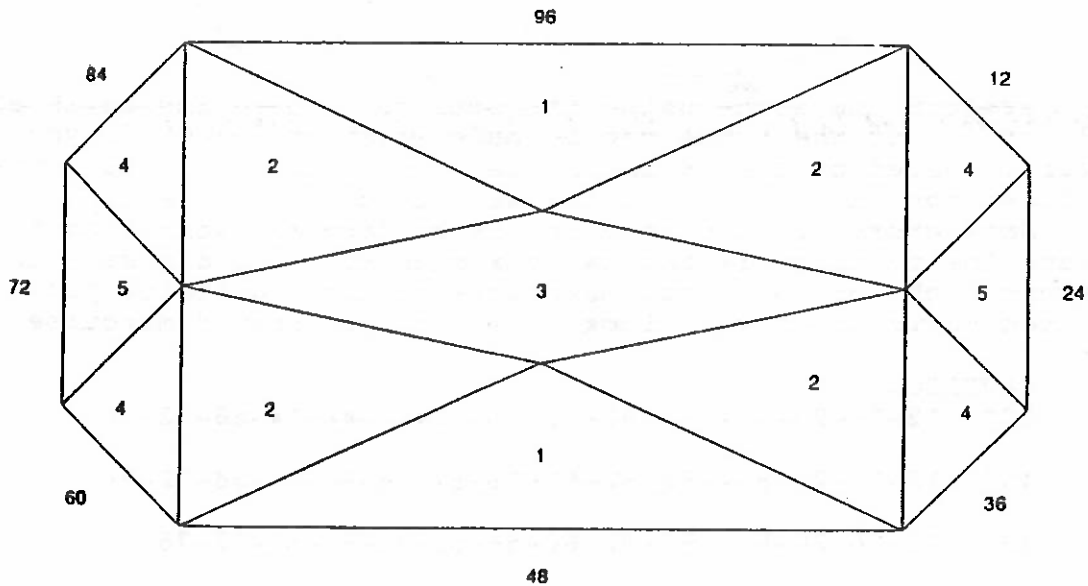
Hey!!!!!! How about 10,000 ATTABOYS for KAREN S. BLISARD and DONALD V. VOXTHIMER. These two stalworths manned the booth for the Midwest Facetors Guild at the Cincinnatti Show !!!!!!!



1 X 2 RATIO

- | | |
|------------------------------|------------------------------|
| 1. $90^\circ = 96-24-48-72$ | 7. $90^\circ = 12-36-60-84$ |
| 2. $43^\circ = 12-36-60-84$ | 8. $40^\circ = 18-30-66-78$ |
| 3. $45^\circ = 9-39-57-87$ | 9. $41^\circ = 21-27-69-75$ |
| 4. $49.5^\circ = 6-42-54-90$ | 10. $43^\circ = 22-26-70-74$ |
| 5. $58^\circ = 3-45-51-93$ | 11. $49^\circ = 24-72$ |
| 6. $73^\circ = 96-48$ | |

DIAMOND BOWTIE
(PAVILION)
96 INDEX GEAR
QUARTZ ANGLES



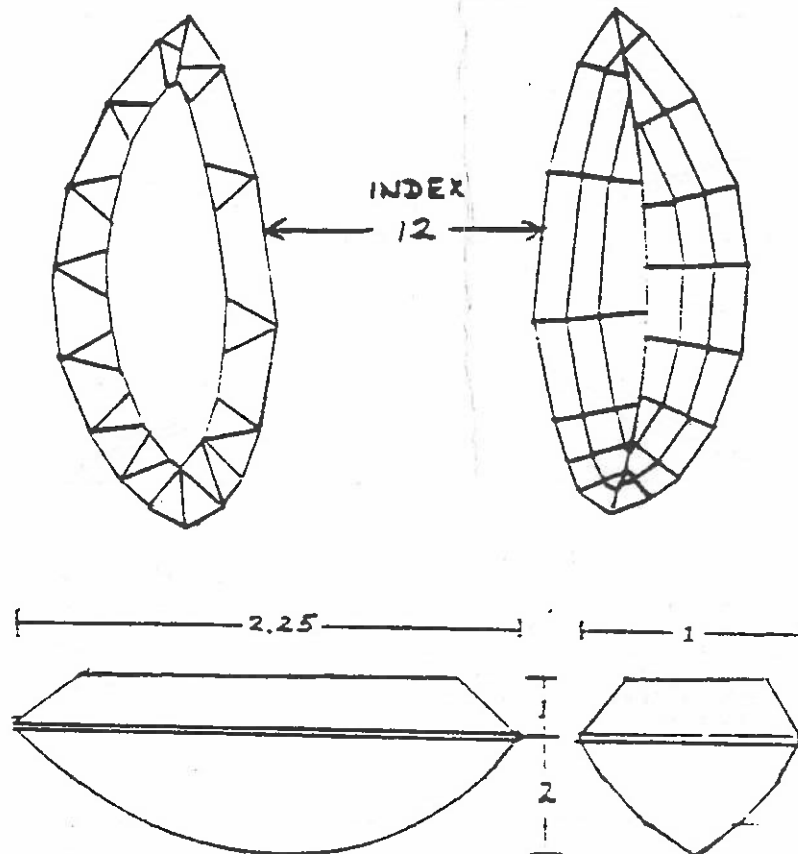
1 X 2 RATIO

- | |
|-----------------------------------|
| 1. $43.5^\circ = 96-48$ |
| 2. $29.75^\circ = 92-4-44-52$ |
| 3. $90^\circ = \text{TABLE}$ |
| 4. $33^\circ = 12-36-60-84$ |
| 5. $42^\circ \pm 1^\circ = 24-72$ |

DIAMOND BOWTIE
(CROWN)
96 INDEX GEAR
QUARTZ ANGLES

Alan E. Fiegelman, Jr.

THE MINT-LEAF CUT By Gene Homan, Columbus, Ohio



Preform the stone using the outline. I used the ratio of 2.25 to 1, but the stone can be made wider or longer if you desire. Based on the 96 index, set the index on 12 and proceed to facet the girdle keeping the general shape of the preform.

Note where 12 is placed on the preform and work from this facet. The pavilion is basically a step cut. You can make the preform right or left, but make sure it has a definite pronounced curve or it will look like a poorly shaped marquise cut.

PAVILION

90° 12-16-20-8-4-96-92-60-56-52-48-44-64-68-72-76

45° 12-16-20-8-4-96-92-60-56-52-48-44-64-68-72-76

43° 12-16-20-8-4-96-92-60-56-52-48-64-68-72-76

39° 12-16-20-8-4-96-48-52-56-60-64-68-72

Match index 12 to line up the crown

CROWN

40° 12-16-20-8-4-96-60-92-56-52-48-44-64-68-72-76

38° + or - 18-14-10-6-2-46-50-54-58-62-66-70-74

This is not an exact cut and the only meets attempted were the step cuts on the pavilion and the star facets to meet at the girdle. I have used variations on this cut, but this should give a general idea to develop the shape.

GEM STUFF

By M. A. (Al) Huebler, GG
Guild Gemologist, New Mexico
Faceters Guild

SOME NOTES ON CUTTING FACETED GEMSTONES FOR COLLECTORS AND/OR COLLECTIONS

This subject includes, but is not limited to, institutions such as museums and schools of higher learning. It also includes cutting for sale or trade to gem connoisseurs and enthusiasts, to professional

collectors, and to amateur collectors in the lay public sector.

The more we cutters learn about the non-cutter recipients that so often end up as the owners of our "labors-of-love," the more obvious it is that too few people understand how to handle and care for our product. We, further, are reminded that the main interest in our output by this "collecting" segment is not in the durable "center area" of our gemstone stable, i.e., the quartz family, beryls, garnets, etc., but rather in the two extremes. At one end are the emeralds, rubies, alexandrites, and sapphires, and etc., and on the other, the soft, brittle and rare stuff.

Fortunately, even the less knowledgeable lay public has some sense of value and destructivity of the high-end goods. It is so often sold, as jewelry, that a majority of the buyers give it a modicum of care because, if for nothing else, it costs "an arm and a leg." But who is to become the protector of the real collector's items, the really rare and very destructible materials that show up on the hardness scale as Mohs 5 and below? I'll tell you who! Lady Luck, The Good Lord, Divine Providence, and YOU, the Cutter!! That's who! And here is how I suggest that you, the cutter, stay involved in the protection of your legacy.

First, we must teach the future owners about handling, protection and maintenance of this fragile material, and, at the same time, establish a reminder system to jog memories at future points in time. Secondly, we must think about, and plan the "cut design pattern" before cutting to build into the resulting gemstone maximum longevity. We must think about orientation away from cleavage and parting planes, using, when available, better-grade

rough, thicker (more sturdy) girdles, and a culet facet (polished) at the bottom of the pavilion. Most all collector- item soft stones are never set into jewelry anyway, so a thicker girdle is not objectionable. Further, the cutting of free-form design gems, to give strength and to save carat weight of rare, expensive rough, is common-place in the "collector-cutting" field. And we must give the rough every possible ounce of "TLC" while in storage, prior to cutting, and during the conversion process from crystal to the finished gemstone. (NOTE: The acts of transferring and the final removal of the finished gemstone from the last cutting dop stick are the functions so often contributing to the eventual reduced longevity of the finished stone. "Haste makes waste!") Finally, we must package the well-cleaned finished gemstone, in a professional manner, for delivery to the new owner, for safety during transportation and during the eventual initial storage as the item is integrated into the collector's "cabinet" system.

Cutter damage to finished gemstones will also be found through the use of gem tweezers, three and four-prong stone holders, dropping of stones to the floor or other hard surfaces, final cleaning in ultrasonic cleaners, and permitting the stones to sit in the heat of direct sunlight.

Collector cutting often involves the very small stones from certain of the rare rough, rough that is never found large or does not form or grow into large crystals. An example is Hauyne. A small, rare, blue crystal of this material from Germany produced for me a gem of 1.5-mm girdle diameter, and I had paid a good deal for this little speck! About \$20.00. Further, many opaque and translucent materials are faceted as collector's stones, many as flat, polished-base, faceted-top

(crown) tablets. (See Glenn Vargas article in January 1991 Lapidary Journal, Vol. 44, No. 10, pg. 81, titled "Out of the Blue.")

It is so important to keep good, complete records when cutting for collectors. Part of the game is extensive collection documentation. A collector will want to know:

1. *The correct, recognized name of the material.*
2. *The country and, if possible, the mine of origin of the material.*
3. *Original weight of the rough.*
4. *Cutter's name, and the date that cutting was completed.*
5. *Finished gemstone carat weight, and maximum girdle diameter in millimeters.*
6. *Cut Design Pattern name.*
7. *Stone quality considerations such as color, make, inclusions and surface blemishes.*
8. *Buyer's (Collector's) Purchase Price.*
9. *If available, the R.I. and S.G. of the stone.*
10. *Each owner will usually develop and maintain an on-going "list of acquisition," naming, where known, previous owners and method of acquiring the stone (e.g., purchase and price, exchange, gift, etc.). If gained by accession, the buyer will record what was traded, sold off or given away to obtain your stone.*

Any or all of the above eleven items of information may be combined into a gemstone orientation and briefing sheet or pamphlet for new collectors. I'm sure that it would be well received.

Lastly, should a stone ever become damaged or broken into two or more pieces, a collector should be told to save the pieces. The material may be very rare and near impossible to replace. Maybe the damaged stone could be recut or the pieces cut into new, smaller stones?

So, for a moment, back to the training and education of the new owner. The teaching must include, but is not limited to:

1. Protection from crushing or accidental dropping damage.
2. Protection from color fading due to excessive artificial or sun light - if material is light sensitive.
3. Protection from abrasion from other stones or foreign materials.
4. Stay away from harsh chemicals, cleansers, ultrasonics, steam-cleaning equipment.
5. Use of special (non-treated) gem cloths, fine gem brushes and air jets for cleaning. Use of white-cotton gloves for handling stones.
6. Problems of excessive climatic conditions: heat, cold, humidity, dampness. Rapid changes of temperature affect certain materials. Beware of hot showcase lamps.
7. Protection from theft and vandalism damage. Security control of collection.
8. When displaying stones, be careful with display clips, clamps, display stands, etc.

9. Keep control over unprotected stones when showing them off to others. Handle over padded jewelry mats or trays; do not let others handle the stone. Take the greatest care when using forceps or tweezers, stone holders and when looking at the stone via lab optical equipment.

10. Use of stone papers, plastic (capped) boxes, etc., for stone storage. (NOTE: White, rayon Coets cosmetic make-up squares (pads) are excellent for padding gemstones that will be stored in gem papers. Sold in local drug and department stores. Place stone in folded pad, then fold up pad within the gem paper.)

11. Discuss with buyer the basics of:

- A. Cleavage and parting planes.
- B. Liquid and/or gas-filled inclusions.
- C. Cracks, feathers, fracturing (healed and unhealed), surface blemishes.
- D. During identification of materials use only non-destructive testing, i.e., do not use hardness tests or wet-chemistry testing!
- E. Recommend insurance on a valuable gemstone collection. Suggest suitable individual stone appraisal for valuable collections.



FACETING TIP

Edward J. Soukup submitted the following information to us suggesting that it may be of some help to the facet cutter. Undoubtedly, it will.

There was a good article on "THE SUPERGLUES" in the *American Gemcutter* on why the gemcutter may be wary of cyanoacrylates, when he sits at his machine and looks at the naked end of his dop stick which has just shed a carefully worked stone. Can a gem cutter go ahead with the super glues, AND KNOW, IF HIS PROCEDURE IS PERFORMED WELL, THAT THE ADHESIVE WILL HOLD? IF CARE IS TAKEN, THE ANSWER IS YES. REMEMBER....THAT THE SUPERGLUES ARE WATER SOLUBLE...

Water and heat can break the bond of super glues. Make sure that the surface is clean by cleaning with alcohol. **NEVER LET THE DISPENSER TIP OF THE TUBE TOUCH ANYTHING.** When using the superglue, hold the nozzle end away from the surface and let a drop of the chemical fall on the surface. **AFTER YOU HAVE EFFECTED A BOND, COVER IT WITH WAX OR EPOXY TO KEEP THE WATER AWAY.**

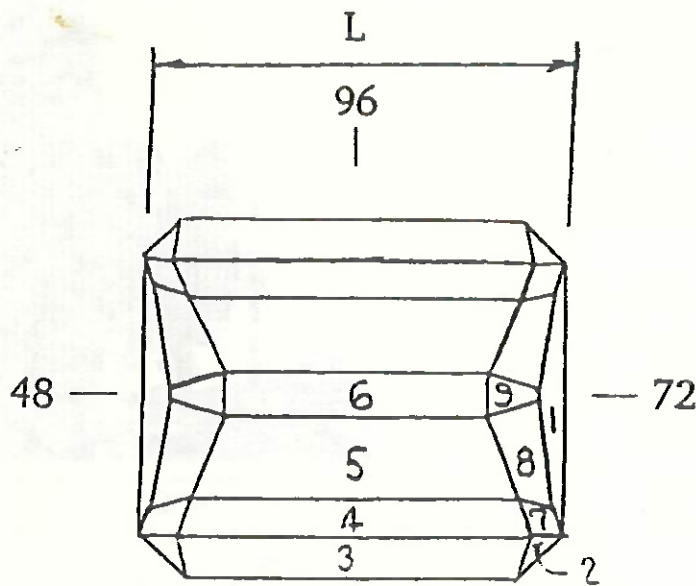
If you do not do this, water can work into the bond and separate the stone. **ALSO....SHEER PRESSURE...AS YOU WORK THE STONE ON THE LAP CAN CAUSE A BREAK.**

A TWO PART FIVE MINUTE EPOXY is the choice for most gemcutters. It is quick, dependable

STEP TOP #2

96 Index

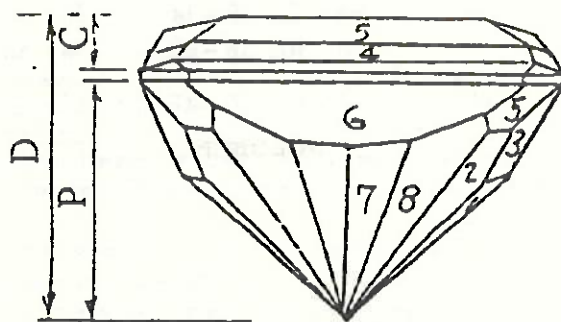
By Charles Covill



CROWN (23 Facets)

Step	Angle	Index
1	65°	96-48
2	43.5°	12,36,60,84
3	43°	24-72
4	25°	24-72
5	15°	24-72
6	0° Crown	24-72
7	40°	90-6,42-54
8	37°	93-3,45-51
9	34°	95-1,47-49

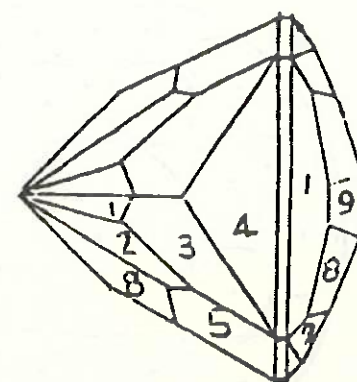
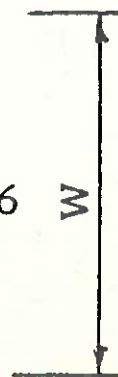
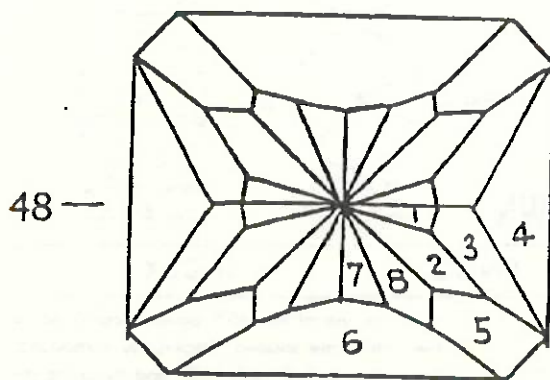
CROWN



PAVILION (28 Facets)

Step	Angle	Index
1	43.5°	94-2,46-50
2	43°	90-6,42-54
3	50°	93-3,45-51
4	63°	96-48
*5	50°	12,36,60,84
6	63°	24-72
7	42.5°	74-70,26-22
8	42°	78-66,30-18

PAVILION



* Do Girdle after Step 5

Angle	Index
90°	96-48
	12,36,60,84
	24,72

Sapphire FACETING GUIDE NO. 93

THE MOON BEAM

Designed & Cut by Dave Miller 3118 Cherokee
Flint, MI 48507

MAKE YOUR P-EFORM AND DO THE CROWN

Cut with the Sapphire Faceting

Unit & Ceramic Polishing Lap.

All 17 round faceted areas in

Crown including the table are

made up of 8 pie shaped facets.

The Pavilion was cut first and

then the high domed Crown.

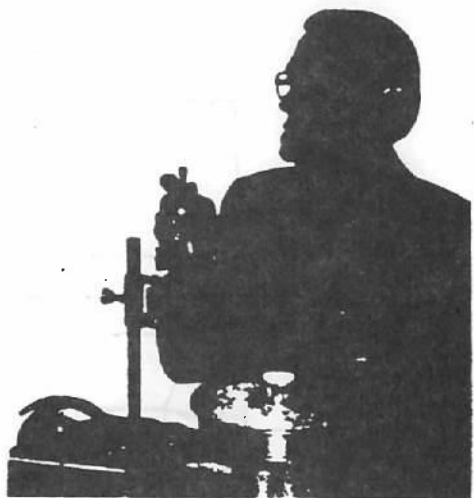
Material: Synthetic Ruby

Diameter: 22.5 mm

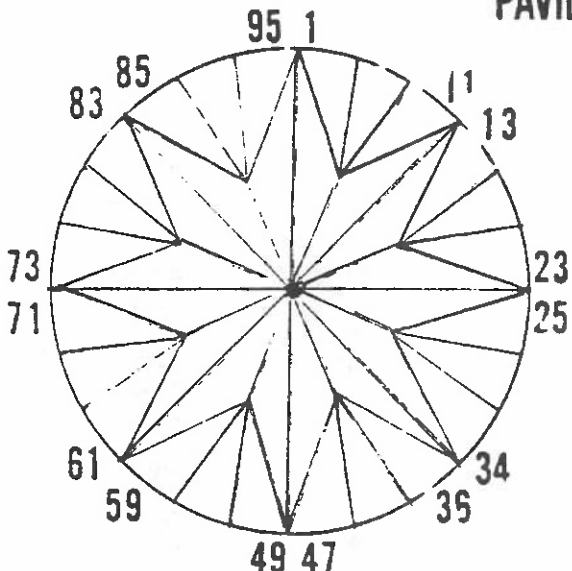
Diameter of Table: 3.5 mm

Total Depth: 19.7 mm

Weight: 73.7 Carats



PAVILION

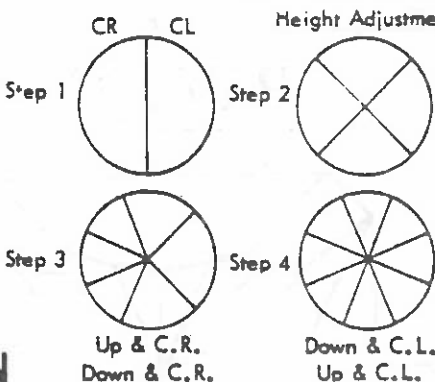


ANGLE	INDEX
42°	Split Mains: 95 - 1, 11 - 13, 23 - 25, 34 - 36, 47 - 49, 59 - 61, 71 - 73, 83 - 85.
44°	Split Girdles: 94 - 2, 10 - 14, 22 - 26, 34 - 38, 46 - 50, 58 - 62, 70 - 74, 82 - 86.
45°	6 - 18 - 30 - 42 - 54 - 66 - 78 - 90

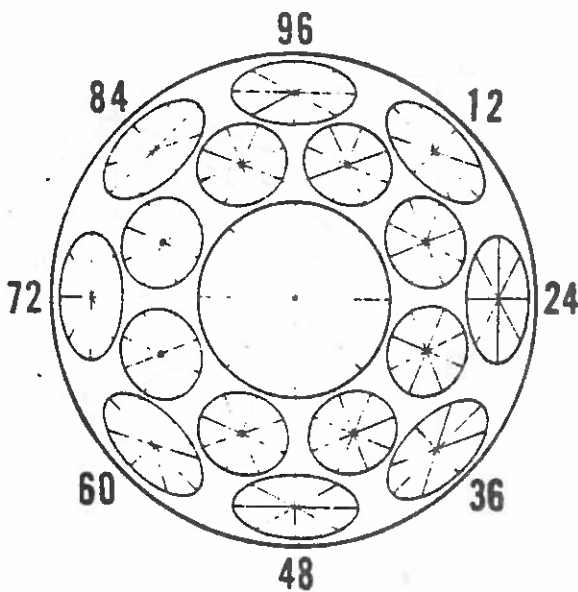
To get the individual pie shaped faceted areas in each of the Crown circular areas of angle 37° and 66° proceed as follows:

CR - Compound Right 1/2° CL - Compound Left 1/2°

Up & Down with Vertical Height Adjustment



CROWN



ANGLE	INDEX
With the use of the 45° adaptor cut & polish the Table, pie shaped Facets, by compounding to the left & right 1/2° and by using the vertical height adjustment.	
37°	96 - 12 - 24 - 36 - 48 - 60 - 72 - 84
66°	6 - 18 - 30 - 42 - 54 - 66 - 78 - 90

To the best of Mr. Miller's knowledge, the flat facets required for this cut can only be accomplished by using the Ceramic Lap. The Ceramic Lap can be purchased from Arrow Profile Company for \$51.00 which includes shipping in the U.S.

GEM STUFF

By M. A. (Al) Huebler, GG
Guild Gemologist, New Mexico
Faceters Guild

ON THE ETIQUETTE FOR GEMSTONE AND GEM-COLLECTION VIEWING

While this column has been written to focus on faceted gemstones, it applies equally well to faceting rough material, cabochon gems and rough, and to mineral and fossil specimen items and collections.

Gemstones, fine, rare and common, are all things of beauty, are fragile, and, to a large degree, things originated in nature. Depending upon species and variety, they can be hard or soft, tough or brittle, cleavable or not - and subject to breakage, fracture and abrasion. Considering their source, and the time and expense necessary to fashion them, all require TLC (tender loving care) throughout their entire life. Most of us involved in the gem-cutting and/or collection fields understand this to be true. But most of the lay public, the philistines who view our product, do not!

The handling of gemstones, by anyone, can, under certain (many) conditions and in many environments, be extremely dangerous. This, not only for the stone, but also for the person handling the stone in order to fully observe its detail. Let's examine this statement a little more closely.

For example, you, the cutter at a faceting demonstration, place a

finished stone on the table out in front of your machine to be viewed in a "non-protected" manner by all who come by to observe your cutting demo. Your machine rests upon a table that sits on a concrete floor. The viewer may or may not be a potential faceter and a possible recruit for Guild membership. This adult viewer does not yet know of, and understand a gemstone's

10.
vulnerability to physical damage. He, or she, can only assume, in ignorance, that the stone, being rather small, is to be lifted up for examination and easy viewing. So he does, and, a moment later, drops it onto the concrete floor! When retrieved, the stone is found to be very badly damaged! You, the cutter, can tell the viewer to "worry not", that it was only an inexpensive stone anyway, or offer some other assurance that he was not at fault and should not be overly concerned. However, you have caused this person, no matter what you might say, to immediately develop a heavy emotional trip, a bad grief/guilt conscience and super embarrassment!!! Do you really think that this person will, in the near future, if ever again get over this shame and want to get close to a gemstone? Probably not! And if you think the impact is bad on an adult, just consider the effect on a viewing child!!

The bottom line here is that you know better and should not have put the uninformed in jeopardy. You, the knowledgeable one, must take the full responsibility for the protection of your gemstones, individually and as a collection! It is for this reason that gemstones are not just left laying around, but rather, are usually kept in secure display cases. You are doing nobody a favor by putting him or her, unknowingly, in jeopardy. That is why there are "touching rocks" and there are gemstones - and

"never the twain shall meet." When I first joined the Guild, over six years ago, and initiated the "Show and Tell" program at our meetings, I purchased a locking, glass-top display case to protect the program's gem display for the evening. It cost me, with the associated external lighting, over \$75.00, but we have never had a damaged or lost stone!! With its excellent lighting, there has been no need for our members to handle the stones.

For a moment, let's look at another very common, somewhat parallel, situation. You invite me over to your house to see some new rough that you just purchased and to view two new faceted stones that you recently cut. You are very eager to have me look at, and enjoy, this material with you. During the excitement of this superb moment, two things often happen. You put your gems in jeopardy of damage and I, losing my calm and awareness of good protective practices, get maneuvered into a position of financial and emotional jeopardy by the excitement of the experience. And one of the new stones snaps out of the three-prong stone holder and falls onto the concrete floor under our feet. (I was holding the stone holder.) So, now who is responsible for this predicament and the chances of damaged stones? The answer, I believe, is both of us, equally. We are both knowledgeable faceters and each must be alert to the damage or loss possibility during handling of gem materials. It is my responsibility to know the proper way to handle and protect gem materials, and to immediately bring to your attention a less-than-satisfactory situation. I will refuse to examine gems that are offered up for my viewing in a haphazard way.

Towards the end of assuring gemstone and gem-rough protection on the part of all concerned, and the

continuation of good friendships, I strongly suggest practice of the following protective steps:

1. Don't teach people (and mainly youngsters), by inappropriate or thoughtless actions, to pick up cut gems with their fingers. Teach them to look and not touch unless, when you feel conditions are right, you invite them to handle your material. To drop a stone can, well be, to destroy it! Don't hesitate to correct people, in a kindly manner, if they touch or endeavor to pick up your stones.

2. Finger oils not only immediately destroy the brilliance of the stone, but make the stone slippery and subject to dropping. Oils can also discolor stones of soft, porous materials and stones having open surface blemishes.

3. Use lint-free white gloves when placing cleaned stones in a showcase. Be sure that the case is fully locked or otherwise secured before leaving it unattended.

4. Don't touch or pick up another person's gemstone(s) without his or her permission.

5. Display stones under a protective covering of glass or rather heavy-weight clear plastic. Do not place them in a position that promotes handling. On many occasions, I have found people using the light from within (or associated externally with) a showcase to examine external items of gem material - large pieces of rough, heavy fossils, etc. This they do, without concern, by holding this heavy material above the showcase glass front or top panel. An accident would have the heavy material breaking through the glass, crushing the stones within the case! Common sense sez not to do these thoughtless things, but even

knowledgeable people have to be corrected on occasions!!

6. Keep control of your materials. When presenting stones for viewing, you hold onto them. Do not physically turn them over to untrained people.

7. Pay attention to the floor material over which stones and rough are handled. Floors should be carpet-covered with a low pile, non-shag material. Stay away from concrete, wood, hard tile, and linoleum. Stones falling on these items can easily be damaged. A light gray or tan carpet color is best if you want to quickly find a small, dropped stone.

in and over a jeweler's lined and padded display tray. These trays are about 15 inches long, 8 inches wide and 1 inch high at the edges. The removable padded liner-board comes in white, black, etc. White seems the best for showing off transparent colored stones (even the colorless ones). A jeweler's gemstone display pad is the next best thing, but not near the protection of the display tray!

9. Do not leave your stones, for long periods of time, in three- and four-prong, wire stone holders. These can damage soft stones, and by temperature change of the wire prongs, send a stone flying across the room.

10. Be very careful when picking up stones in gem tweezers or tweezers that are a part of gemological test equipment. Never use locking tweezers. Tweezers, of all kinds, have a great propensity for snapping your stones all over the room. Beware of some of the new Asian-made gem tweezers. They have a very hard, rough-surfaced tip. While the stone does not often shoot out of the tweezer, it may get badly scratched!! Really, the best way to pick up an individual stone is by means of a lint-free, gloved hand. Rubber finger cots, from the drug store, are also used occasionally. A small metal gem scoop should be used for melee and other very small material.

11. For protection, stones should be stored in gem papers (made for this purpose, or you can make your own out of non-sulfured paper) or in plastic, covered boxes. Both papers and the plastic boxes should be enclosed in appropriate, covered gem cases. Velvet-lined, grooved boxes and Riker Mounts can also be useful.

12. Use a jeweler's gemstone cloth Kimwipes lint-free paper, brushes, alcohol, etc. to keep your stones clean. Clean stones are easier to handle than dirty, greasy ones, and they certainly view with much more beauty.

Another way to look at this is that, with a bottom key, the surface being cut and the key notch are both on the bottom so you are cutting at the notch set on the index wheel. With a top key, you are setting the angle at the top and cutting at the bottom, which is 180 degrees away.

JACK THE RIPPER

The following information is condensed from an article by John L. Koivula, Edward Boehm and Robert C. Kammerling, writing in *Gems & Gemology*, summer 1990 issue. — sent me the clipping but forbids me to mention her name. You can guess, if you wish.

The article, DIAMOND GRIT-IMPREGNATED TWEEZERS: A POTENTIALLY DESTRUCTIVE GEMOLOGICAL TOOL, describes comparative tests made with this tool and the older, scored metal tweezers. Cut synthetic ruby and diamond stones were handled with each tool type in a manner consistent with normal use. The test stones were microscopically examined before and after each test handling. The old scored metal tools caused no stone damage. The diamond impregnated-tweezers always caused easily discernible damage to both ruby and diamond stones. The authors observed no advantage to the diamond-impregnated tool and do not recommend its use with colored gems.

Al Huebler has mentioned tweezers and gem handling in his columns. He does not really recommend tweezers for handling stones and adamantly condemns their use with gems softer than quartz. (Note that word, "adamantly." It originally referred to things with a hardness that was diamond-like. I'm certain that Al really, really frowns on those diamond-impregnated tweezers.)

STEP CUT HEART

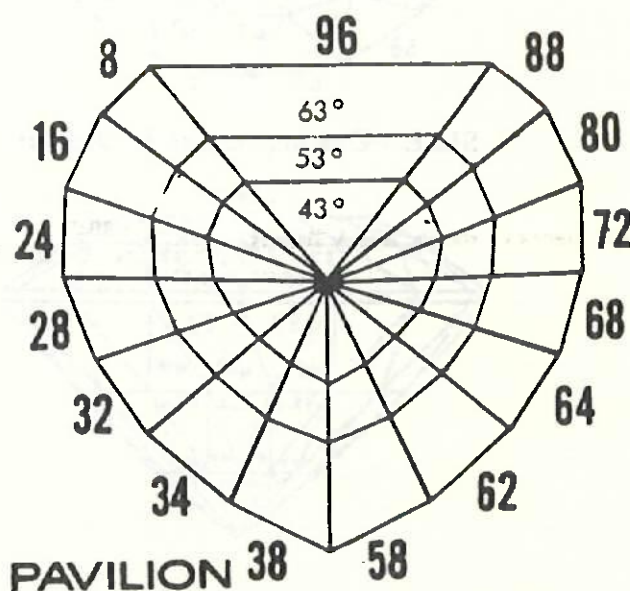
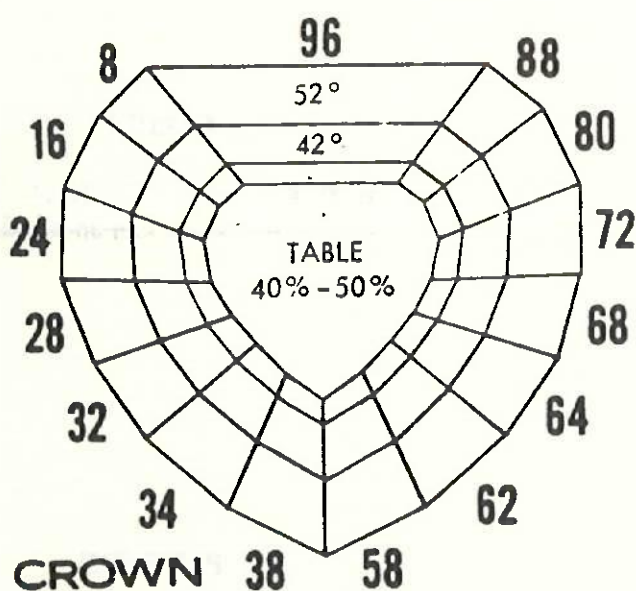
Submitted by **Don R. Tielens, M.D.**

3230 Royal Knight Dr. #5
Memphis, Tenn. 38118



91 FACETS USING 96 INDEX GEAR
ANGLES ARE FOR QUARTZ

Preform to approximate shape freehand then mount in chuck so that flat part of heart is on index 96 then square or flatten girdle at 90° indexing at 96, 8-88, 16-80, 24-72, 28-68, 32-64, 34-62, and 38-58. The height of the stone will have to be adjusted with each pair of facets so that symmetry will be maintained. It's a good idea at this point to go ahead and polish the girdle. By faceting the girdle rather than leaving it rounded the thickness of the girdle is the same completely around the stone and gives it a more tailored appearance.



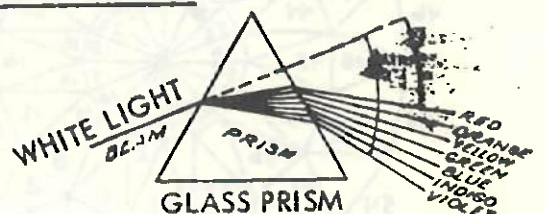
	ANGLE	INDEX
GIRDLE FACETS	52°	1st cut
MAIN FACETS	42°	2nd cut
TABLE FACETS	27°	3rd cut

Polish
in
reverse
order.

	ANGLE	INDEX
MAIN FACETS	63°	1st cut
MIDDLE FACETS	53°	2nd cut
CULET FACETS	43°	3rd cut

Fire is the common name for dispersion. It is the ability of a gem material to separate white light into its component colors.

The colors resulting from dispersion are not constant colors like the red of ruby or the green of emerald, but are colors that change with every tilt of the stone. To display a maximum of dispersion a stone must be properly cut, facet angles must be correct. But also, the material must be of moderately high dispersive ability.



The breaking up of white light into the spectrum colors of which it is composed.

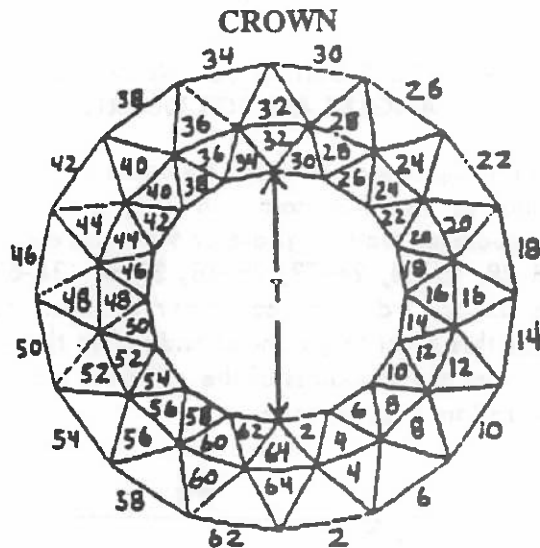
1992 AUSTRALIA VS UNITED STATES FACETING CHALLENGE AND INDIVIDUAL INTERNATIONAL FACETING CHAMPIONSHIP COMPETITION

SECTION 4 - COLOURED SYNTHETIC CORUNDUM

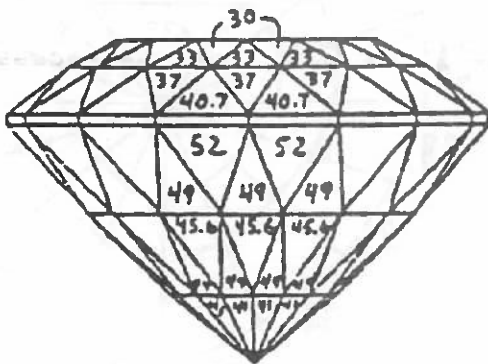
FVS-51 Split Main Orion Cut

Designed By Fred Van Sant

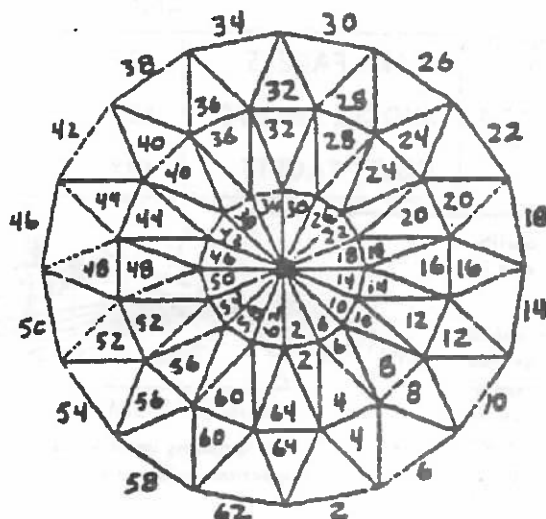
64 Index Gear - Angles For Corundum



SIDE - Cutting Angles in Degrees



PAVILION



CUTTING INSTRUCTIONS

CROWN

- | | | |
|----|--------------|---|
| 1. | 16 at 40.74° | 2-6-10-14-18-22-26-30-34-38-42-46-50-54-58-62 |
| 2. | 16 at 37.00° | 64-4-8-12-16-20-24-28-32-36-40-44-48-52-56-60 |
| 3. | 16 at 33.00° | same as set 2 |
| 4. | 16 at 29.99° | same as set 1 |

GIRDLE

- | | | |
|----|--------------|---|
| 1. | 16 at 90.00° | 2-6-10-14-18-22-26-30-34-38-42-46-50-54-58-62 |
|----|--------------|---|

PAVILION

- | | | |
|----|--------------|---|
| 1. | 16 at 52.00° | 2-6-10-14-18-22-26-30-34-38-42-46-50-54-58-62 |
| 2. | 16 at 49.00° | 64-4-8-12-16-20-24-28-32-36-40-44-48-52-56-60 |
| 3. | 16 at 45.63° | same as set 2 |
| 4. | 16 at 44.00° | same as set 1 |
| 5. | 16 at 41.00° | same as set 1 |

(The original source shows a faceted girdle, but did not include a girdle cutting step. We have included it here to avoid any confusion.)

A PROCEDURE FOR POLISHING CORUNDUM

by Lou Darby

Having problems polishing a 30 mm corundum (laser ruby) on a ceramic lap with Extender Fluid and 100,000 diamond spray, I hit upon the following procedure, which gave excellent results without Extender Fluid.

Ceramic Lap. 100,000 Diamond Spray.
Solid graphite stick, General's "Kimberly" 976-6B, 1/4" x 1/4" x 3"
Stethoscope (purchased in a Science Eqpt store).
Razor blade - Single edged. Hardware store.
* Isopropyl Alcohol (Drug store). and tissue paper.

Clean the lap with tissue paper soaked with alcohol. Allow to dry.

With lap rotating, apply graphite in a continuous spiral from the centre out, and vice versa. Reverse the lap direction, and repeat.

With lap stopped, apply the diamond in 3 or 4 short bursts.

Before the fluid in the spray has dried, rotate the lap at a medium speed, and with a little finger, spread the diamond/fluid over the lap. It may look a little messy and uneven, but that's O.K.

With the lap stopped, lower the facet you want to polish with a slight back-and-forth movement, until contact is made. Some of the graphite/fluid will transfer to the stone. Examine the facet, adjust with cheater(s) if necessary, wipe the stone with tissue slightly moistened with alcohol, and repeat. (I use an OptiVisor with #7 lens, or a 10-power loop, as necessary.

Start your lap at a low speed, and apply a large piece of corundum to it. This will tend to drive the diamond into the lap and seat it. Agate, being much softer, would have a greater tendency to pick up the diamond.

While the lap is still rotating, apply the single-edged razor blade GENTLY to the lap, angled so that it slices the lapping medium. You'll feel and hear the blade picking up large particles as they strike the blade. The blade will then ride smoothly over the lap.

Put on your stethoscope, and bring it close to your stone as you apply it to the lap. If the hissing sound is fairly uniform, you're in business. If a ticking sound is heard, remove the stone from the lap, and while the lap is still rotating, apply the razor blade as above.

I found that almost every time I picked up the stone to examine it, I would get a ticking (scratching) sound when I put it back on the lap. This would be due to the agglomeration of diamond/graphite/corundum/lap (also corundum) and the dried organic in the spray, all of which accumulate around the facet. When the stone is lifted from the lap, some of this junk sticks to the lap as a lump, and causes deeper scratching.

The safest procedure then, is to apply the blade every time the stone is removed for inspection, unless the wiped stone is placed back on an area of the lap not used during the last application of the stone.

* Isopropyl alcohol dries more slowly than methyl or ethyl alcohols, and is therefore more convenient to use on tissue for wiping stones.

Warning: Do not have an open bottle of methyl or isopropyl alcohol next to an open bottle of beer. Much spitting may follow. Aug/86

MIDLAND GEM & MINERAL SOCIETY LEVEL II - NOVEMBER 3-4, 1990

The ORION CUT

FVS-36

64 Index Gear

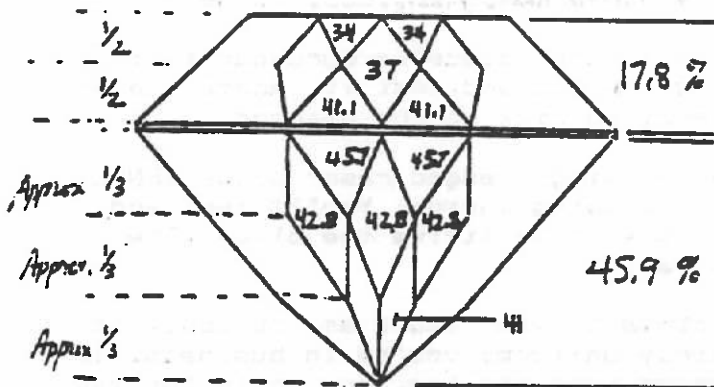
Angles for Corundum

Crown:

1. 16 at 41.1° I 64, 4, 8 etc.
2. 16 at 37° I 2, 6, 10 etc.
3. 16 at 34° I 64, 4, 8 etc.

This a reduction of the SHORT-PORT CUT, having only three sets of facets in each of crown and pavillion instead of four. The less angle change between set 1 and set 3 facets in the pavillion gives the finished stone greater brilliance.

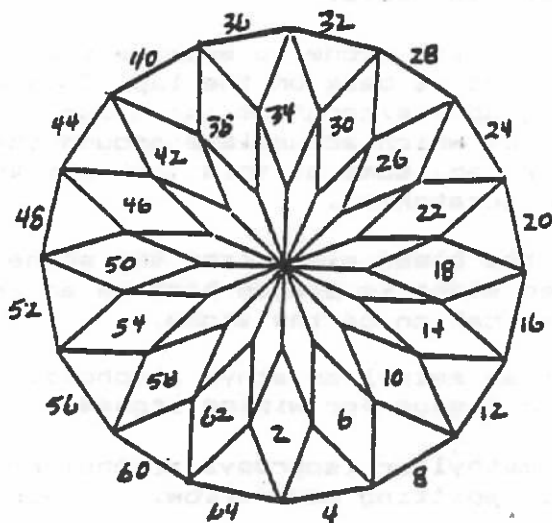
The crown is the same as the spike brilliant; the difference is in the pavillion.



Cutting Angles
 in Degrees.

GIRDLE SHOWN IS FACETED; COULD BE ROLLED.

$$\frac{H}{TV} = 65.0\%$$



Pavillion:

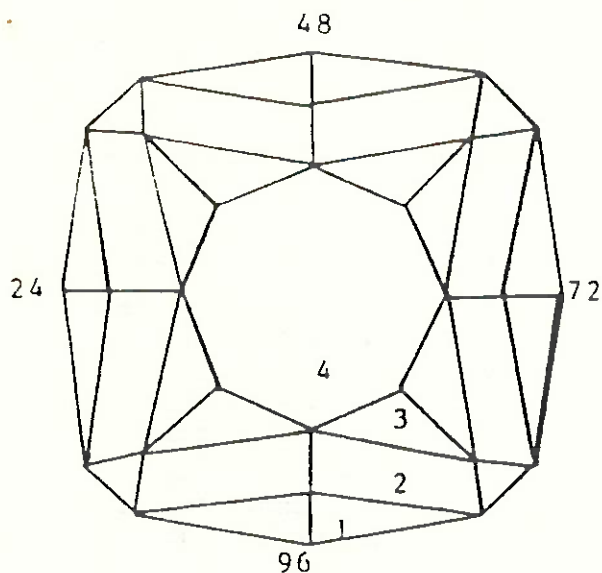
1. 16 at 45.7° I 64, 4, 8 etc.
2. 16 at 42.8° I 2, 6, 10 etc.
3. 16 at 41° I 64, 4, 8 etc.

by Fred Van Sant
 revised 1/1/87

2 - 16 SQUARE CUSHION

By Evan A. Williams

P/O Montville Queensland 4560



Chevron Crown

1. Girdle row and corners.
93-3-12-21-27-36-45-51-60-69-75-84.
2. Mains.
92-4-20-28-44-52-68-76.
3. Stars.
90-6-18-30-42-54-66-78.
4. Table.

Angles.

1 - 44°, 2 - 38°, 3 - 28.8°, 4 - Table.

Pavilion

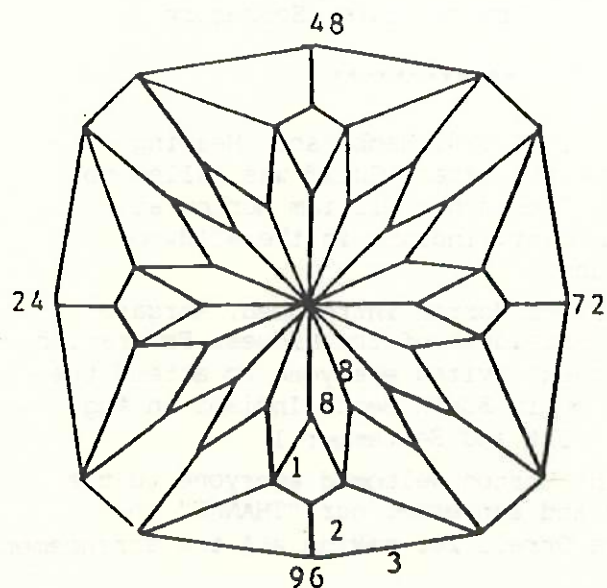
1. Girdle mains. Cut to culet point.
96-48-24-72--12-36-60-84-90-6-18-30-42-54-66-78.

Meetpoint sequence for girdle break facets and girdle outline.

2. Girdle break facets.
93-3.
3. Girdle.
93-3-12-84.
4. G/Bs.
21-27-69-75.
5. Girdle.
21-27-69-75-36-60.
6. G/Bs.
45-51.
7. Girdle.
45-51.
8. Culet row.
93-3-45-51-21-27-69-75---
cut to culet point,
---9-15-33-39-57-63-81-87.

Angles.

1 - 43°, 2 - 51°, 3 - 90°, 4 - 51°, 5 - 90°,
6 - 51°, 7 - 90°, 8 - 40°.



Reprinted using format of original instructions as published in 1992 Australia v United States Faceting Challenge and Individual International Faceting Championship SCHEDULE & CONDITIONS. Stone to be cut in coloured cubic zirconia.

SECRETARY'S MINUTES

The May 11, 1991 Board of Directors of the Midwest Faceters Guild was called to order in the Wildwood Restaurant in Michigan City, Indiana by President, William Horton. Those in attendance were President Horton, Arthur Kalinski, Elery Holt, Frances Bush, Bernard Bush, Thomas Gibbs, Dorothy Loyd and Doris Medlen.

The minutes were approved as published in the "Midwest Faceter", through a motion made by Tom Gibbs and seconded by Art Kalinski.

Tom Gibbs made a motion, "To accept the Treasurer's report as read by Elery Holt." Motion was seconded by Dorothy Loyd and the report was accepted and filed for audit.

OLD BUSINESS:

Bill Horton reminded that \$25.00 will go into the Scholarship Fund in memory of any deceased Member. Monies from the sale of Dave Miller's books is also designated for the Scholarship Fund.

Show flyers are available and are considered the best source of advertisement. Please distribute them to your friends and post them in your local area.

Bill Horton will locate our Incorporation Papers and up date them.

The Seminar will be August 9, 10, 11th at Mt. Clemens Community Center; 300 N. Grosbeck Highway; Mt. Clemens, Michigan. The information will go out in a special bulletin.

The next meeting will be held in Toledo, Ohio on August 3, 1991 at HJ'S Prime Cut; 206 New Towne Square Drive. Flyers will be readied for mailing.

Two bids for the large Champaigne CZ have been received. A request for additional bids will be made at the Membership meeting.

Chairman, Art Kalinski reported the Show plans are going well. Three lectures will be held on Saturday and three on Sunday. Don Le have a program at 2:00 PM on Saturday and Jay & Birdie Nichols will present a slide program on South America on Sunday.

Two meeting rooms have been reserved for Speakers, two rooms for Hospitality and one for Judging.

New Business:

Bill Horton will be the delegate to the Midwest Federation Convention.

Nominations for Candidates will be requested for the Lapidary Hall of Fame.

A letter was received from Betty Mack inviting the Midwest Faceters Guild Members to attend ITC with their group. They will leave from Saginaw. Bill has information if you are interested.

Information is available for the Midwest Convention in South Bend, Indiana August 30, 31 and September 1, 1991.

Bill Horton will write an article on how to order peridot from Leo Stevens.

Bill Horton would like and old BMI machine, if anyone has one available.

David C. Bean of New Jersey would like to be in contact with faceters in that area. So far Bill has helped get two groups started in New Mexico, two in Arizona and one in Ohio.

Raffle Prizes are needed. Any item will be greatly appreciated. Does not need to be faceted. Doris & Lester Medlen will donate a Silver necklace.

A motion, "To adjourn" was made by Tom Gibbs and seconded by Art Kalinski. Meeting adjourned at 10:20 AM.

Respectfully submitted,
Frances Bush, Secretary.

The May 11, 1991 Membership Meeting of the Midwest Faceters Guild was called to order by President, William Horton at Michigan City, Indiana in the Wildwood Restaurant.

President Horton introduced, Margaret Heinek, President of the Midwest Federation. Mrs. Heinek invited everyone to attend the Convention in South Bend, Indiana on August 30, 31st and September 1.

President Horton welcomed everyone to the meeting and expressed our "THANKS" to Clarence Orrell for making all the arrangements.

(next page, please)

SECRETARY'S MINUTES (cont'd)

Tom Gibbs made a motion, The March minutes be approved as published in "The Midwest Faceter'." Bill Schell seconded the motion and it carried.

Treasurer, Elery Holt's report was accepted as read by Tom Gibbs and filed for audit through a motion made by Tom Gibbs and seconded by Gail Sahr. (Elery had laryngitis).

Bill Horton paid tribute to Helen & Larry Murray for their part in organizing the Guild and explained "THE MURRAY AWARD" is given annually in their memory to the individual/individuals that have contributed their efforts for the betterment of the Guild.

Dorothy Loyd expressed the need of Natural stones (especially colored sapphires and rubies) for the Birthstone Cases. The cases will be exhibited at the 1992 AFMS & Midwest Federation Show in Brunswick, Ohio. Margaret Heinek will send the information to the Rules Chairman before their meeting in Tampa, Florida so they can determine if all three cases can be entered in the "Open" or "Educational" categories and will be acceptable in area needed.

No reports from the Membership, the Editor or Historian, all were absent.

Education Chairman, Bernard Bush reported the August 3rd meeting would consist of getting Show Flyers ready to mail. Bill Schell will have his informative morning session while the Board is in progress.

The price for the Seminar is \$30.00 and will be held August 9, 10, 11th at Mt. Clemens Community Center. Kathleen Myers is Seminar Co-ordinator. The fee includes materials. Some machines are available for those that do not have them. The Seminar will be divided into five classes. 1- for the new cutter; 2 - novice having cut a few stones; 3- Intermediate cutter; 4 - Advanced & Intermediate and 5 - Advanced. See special bulletin for registration and other details.

Bill Horton has written an article on "Designs & Facets" for the "Lapidary Journal". Does not know when or if it will be published.

Chairman, Doris Medlen will need help

from everyone to bring in food & snacks for the Hospitality Room during the Show.

Show flyers are available and should be used whenever and wherever possible.

Show Chairman, Arthur Kalinski reported all the Committees and Dealers are set and a lot of help is needed at the Show. Joe Scott will help with Judging. A lot of Exhibits, both competitive and non-Competitive are needed. RAFFLE PRIZES are needed and all donations will be greatly appreciated.

Demonstrations Chairman, Bill Schell is requesting the use of all types of machines to be demonstrated at the show..

NEW BUSINESS:

Coming Shows that should be supported by Guild Members are: Dearborn, MI May 18-20th; Chicagoland at Wheaton, IL; Traverse City, MI (MGAGS) June 22nd-23rd; Bloomington, IN, June 21st-23rd; Midwest Federation, South Bend, IN August 30, 31 and September 1st; Toledo, OH, September 6, 7 and 8th; and the 1992 AFMS & Midwest Convention in Brunswick, Ohio.

Kitty Starbuck is the new Editor of the "Midwest Federation Newsletter".

Tom Gibbs made a motion, "That Bill Horton represent the guild as delegate to the Midwest Federation Council meeting." Seconded by Art Kalinski. Bill Crull will act as alternate. Help will be needed to have continuous demonstrations in the Booth at South Bend. Let Bill know if you will be available.

Nominations for the "Lapidary Hall of Fame " are:

David Miller - Deceased
Anne & Bill Cook - Minerals
Bill Horton - Lapidary
Ceil Duluk - Fossils
Dorothy Loyd - Educational

Tom Gibbs made a motion the above persons be accepted for nominees to the "Lapidary Hall of Fame". Motion seconded by Doris Medlen and carried unanimously.

Eleven of the Replicas of the World's largest diamonds have been completed and will be shown at Chicagoland and Toledo Shows before going to the Field Museum.

Members were asked if they wanted to

(next page, please)

SECRETARY'S MINUTES (cont'd)

submit their names in the drawing for the large Champaigne CZ. The drawing was held and Richard Kalinski purchased it for the pre-set price of \$100.00.

A request was made for diagrams and Faceting helps that may be passed out in our booth in South Bend.

Betty Mack of Saginaw invited the Guild Members to join their group to attend a field trip to ITC in Shelby, Michigan. Bill has information.

Clarence Orrell set up the new Faceting machine manufactured by the Imperial Gem Instruments of Harbor City, California.

Bill Horton will head the Nominating Committee. So far candidates are: Arthur Kalinski for President; Thomas Gibbs for Vice President and Elery Holt for Treasurer. Other

candidates will be listed as they become available. If you feel you would like to run for office, please let Bill know your wishes.

Elery Holt has Midwest Faceters Guild Pins available for \$3.00 and will collect dues at any meeting.

Gail Sahr made a motion, "To adjourn." Joe Kossack seconded the motion and it carried. Meeting adjourned at 2:03 PM.

OUR THANKS to Nettie DuSold for supplying the information on hotels, camping, etc and for the tape on "Gemstone Enhancement, The Advancing Technology". Many thanks to all that helped make a most enjoyable day in Michigan City, Indiana.

Respectfully submitted,
Frances Bush, Secretary.

RAFFLE 1991

PRIZES ARE NEEDED!

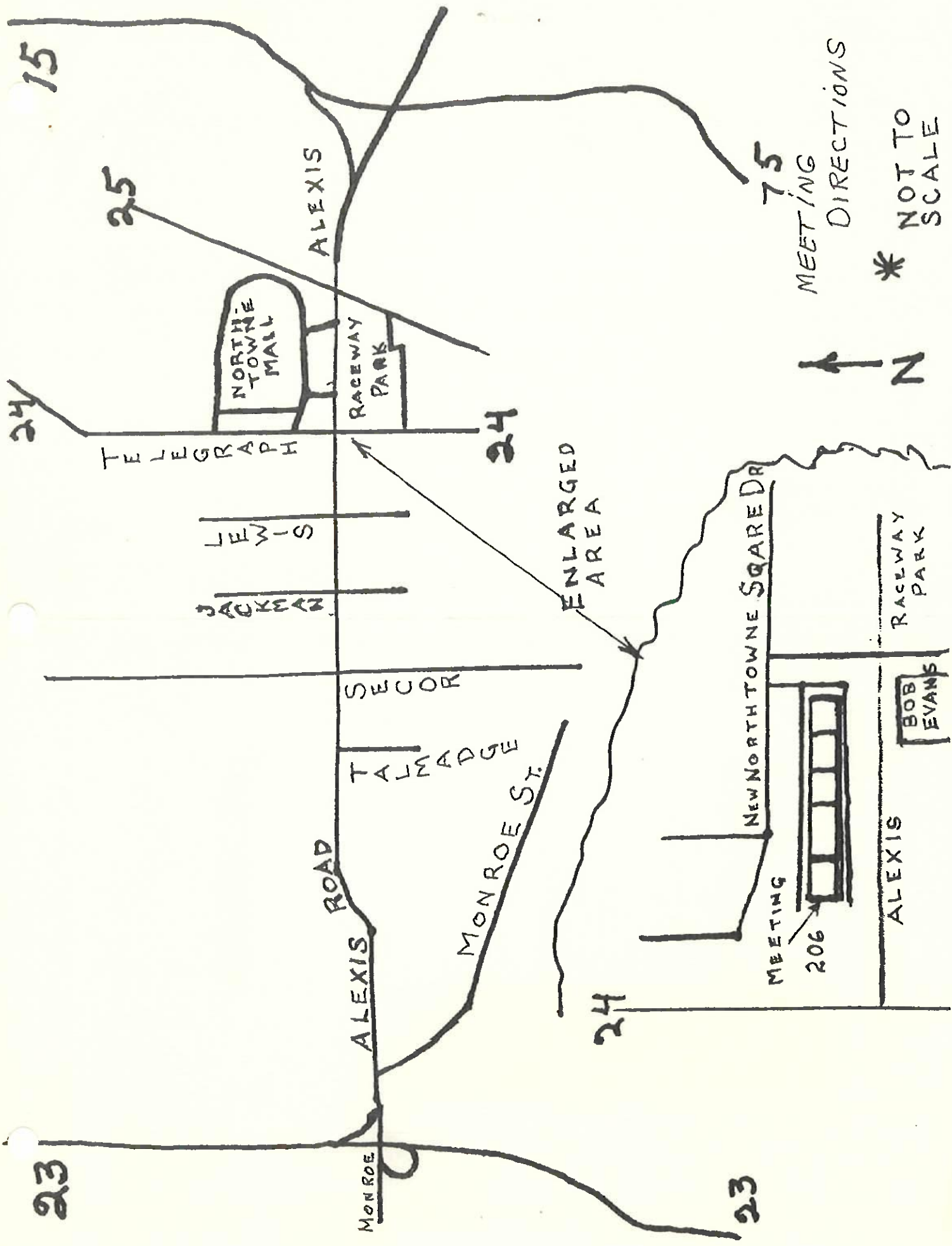
If you do not wish to purchase or sell your raffle tickets. Please return them so we can have them available for sale at the Show.

Thank You,
Bernard & Frances Bush, Chairmen.

M E E T I N G
AUGUST 3, 1991
HJ'S PRIME CUT
206 NEW TOWNE SQUARE DRIVE
TOLEDO, OHIO

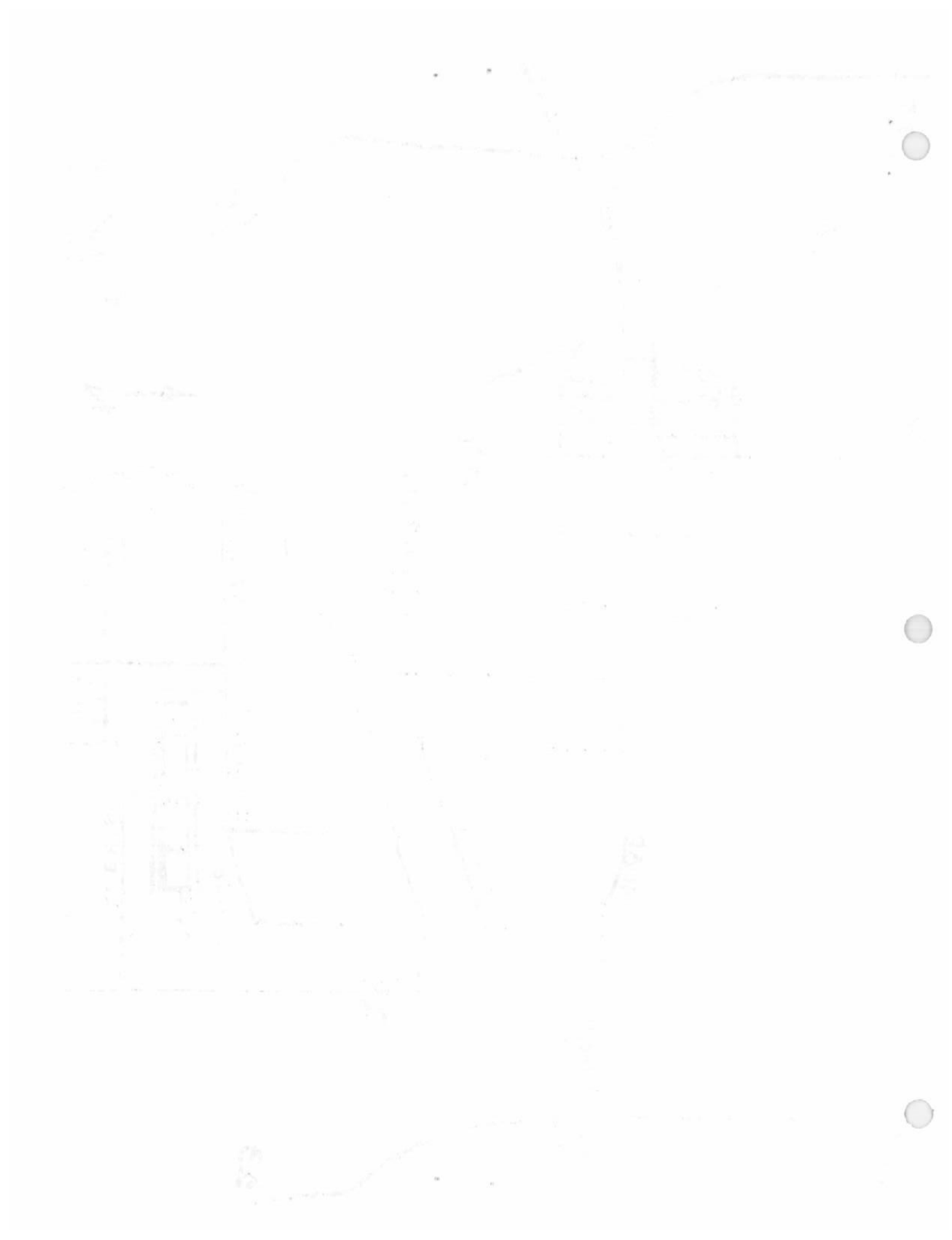
10:00 AM ----- BOARD MEETING
1:00 PM ----- Regular Meeting &
Program

Bernard Bush, Program Chairman



MEETING
DIRECTIONS

* NOT TO
SCALE



Midwest Faceters Fair

GEM and JEWELRY SHOW

hosted by the
Midwest Faceters Guild

MIDWEST
FACETERS
GUILD

1991

OUTSTANDING EXHIBITS • COMPETITIVE AND NON-COMPETITIVE DISPLAYS IN FACETED
GEMS AND RELATED JEWELRY • RETAIL DEALERS • DEMONSTRATIONS •
FACETING MACHINE EXHIBIT • SPECIAL EXHIBITS • HOW-TO-PROGRAMS

NOVEMBER 15 • NOVEMBER 16 • NOVEMBER 17

6 p.m. - 9 p.m.

10 a.m. - 6 p.m.

10 a.m. - 5 p.m.

DEARBORN CIVIC CENTER

15801 Michigan Avenue, Dearborn, Michigan 48126

DONATION: \$2.50 ADULT • Children under 12 FREE

DEALERS

- A & B Jewels & Tools,
Williamston, MI
- A & B Specialty, Co.,
Columbus, OH
- Acres of Gold,
North Baltimore, OH
- ASQ Corporation,
Southfield, MI
- F & L Minerals,
Allen Park, MI
- Fowlers Wirewrapping,
Goochland, VA
- Hillcrest Gems,
Bloomfield Hills, MI
- House of Williams,
Loveland, CO
- J. & P. Gems,
Germantown, MD
- The Jewelry Depot,
Northfield, OH
- The Jewelry Shoppe,
Mt. Clemens, MI
- Master Connection, Inc.,
Federicksburg, TX
- Mine Design,
Clarence, NY
- M. Phantom Minerals,
Columbus, OH
- R & M Gems,
Algonac, MI
- Russell's Trees & Treasures,
North Liberty, IN
- Silvertown,
Cleveland, OH
- SJ Gemstones,
Painted Post, NY

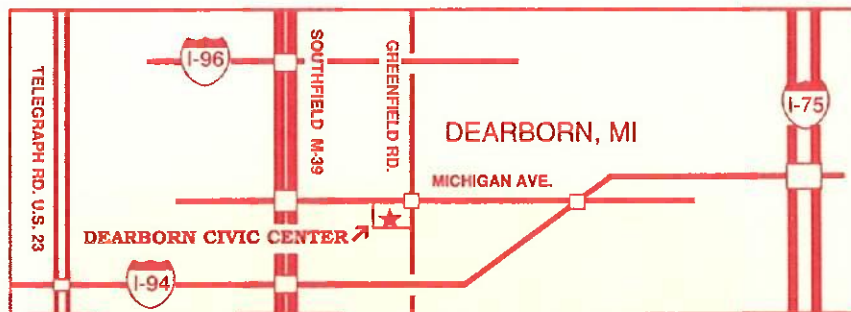
PROGRAM SPEAKERS

JOHN LAURI, GG, ASA, will give two lectures:

DIAMONDS
and
APPRAISING GEMS

JERRY CALL will give two lectures:

BRAZILIAN GEM STONES
and
MINING



Art Kalinski, Show Chairman
Phone: (313) 871-5610
John Tate, Co-Chairman
Phone: (313) 274-9561

William Horton, Exhibit Chairman
Phone: (517) 546-2159
Kathleen Myers, Co-Chairman
Phone: (517) 624-9178



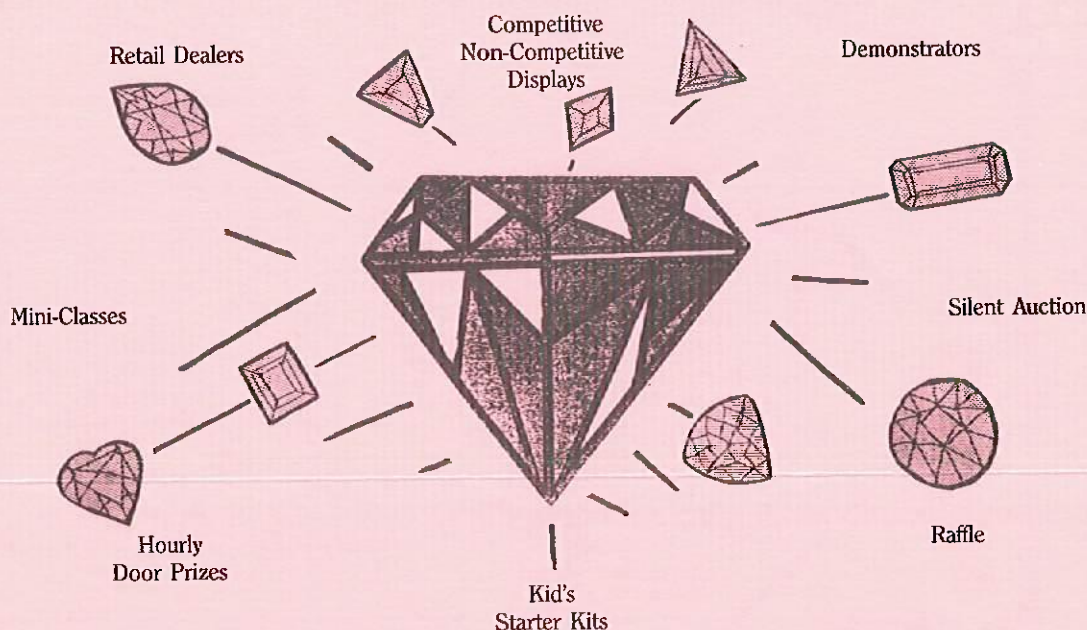


Toledo Gem and Rockhound Club

21st Annual

Jewelry, Gem & Mineral Show

"We're In The Pink"



AT THE MASONIC COMPLEX
4645 HEATHERDOWNS BLVD.
TOLEDO, OHIO

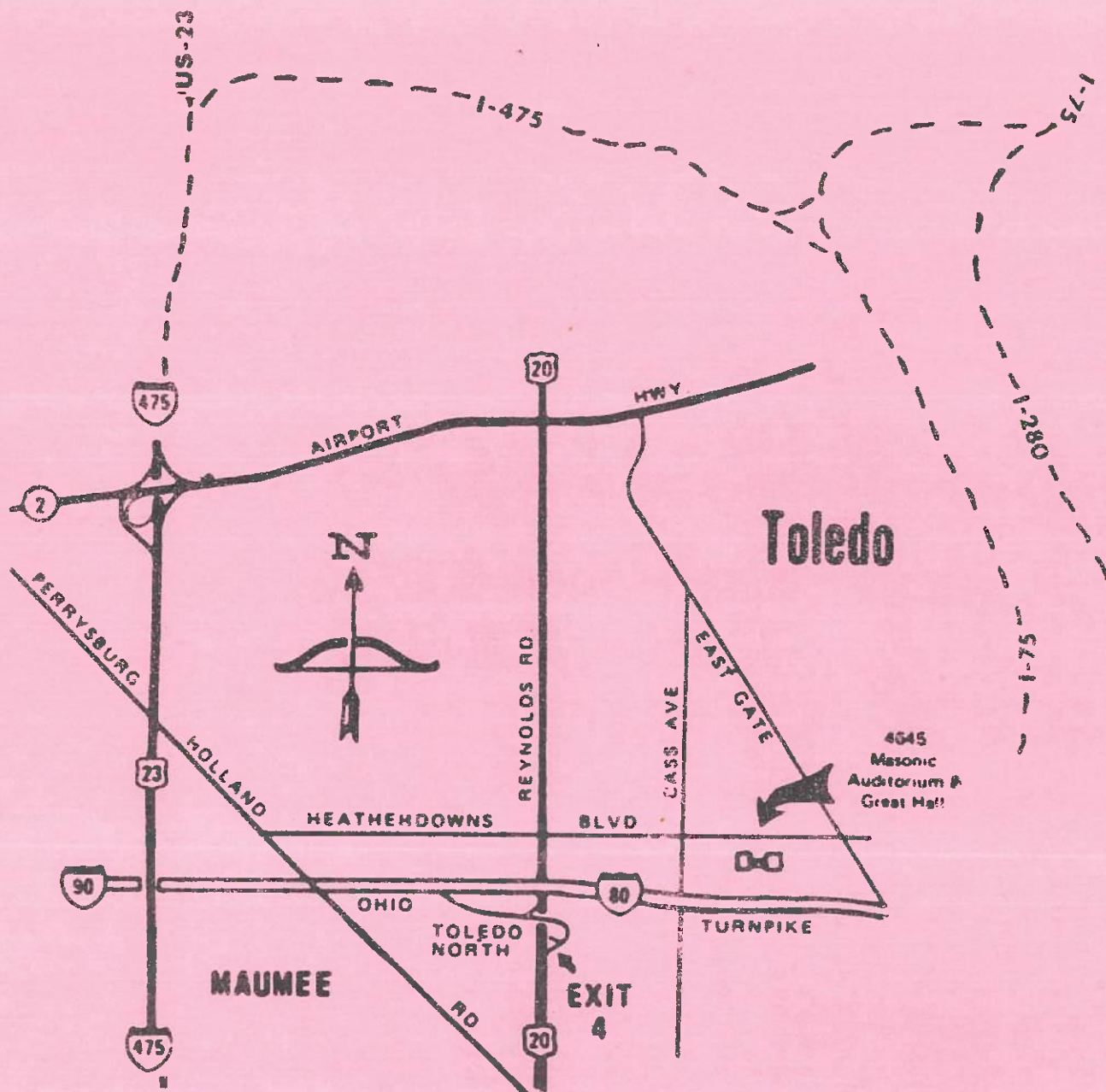
September 6 thru 8, 1991

Friday 4:00 p.m. - 9:00 p.m.
Saturday 10:00 a.m. - 9:00 p.m.
Sunday 10:00 a.m. - 5:00 p.m.

— Open To The Public —

Show Chairman
Tom Barnes
422 Deline Dr.
Toledo, Ohio 43615
(419) 865-2221

Donation:
Adults\$2.00
Students
& Seniors\$1.50
Children 12 & under
with AdultFREE



DEALERS:

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Archy's Rock Shop
Mason, Mich.

Pearl Pond
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Golden Sunrise
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Ron's Rocks & Fine Gifts
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Village Originals
Westlake, Ohio

Silvertown
Cleveland, Ohio

Russell's Rock Shop
North Liberty, Ind.

Touchstone Minerals
Richmond, Ind.

J & P Minerals
Germantown, Md

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Millersburg, PA

House of Williams
Loveland, CO

DEMONSTRATING DEALERS: Green Gems -Wichita Falls, Texas. The Jewelry Depot -Northfield, Ohio. Treasurers of Earth -Bowling Green, Ohio. R & J Craft -Toledo, Ohio.