# THE MIDWEST FACETER

MAY, 1991

VOLUME 12, NUMBER 3

AN EDUCATIONAL PUBLICATION OF THE MIDWEST FACETERS GUILD

THE MIDWEST FACETER
807 Moran
Lincoln Park, Mi.
48146



*Dated Material*
*Please Deliver*

# T H E  M I D W E S T  F A C E T E R S  G U I L D

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 andGEOLOGICAL SOCIETIES
THE AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES

OFFICIAL PUBLICATION: T H E  M I D W E S T  F A C E T E R

OFFICERS:

| | | | |
|---|---|---|---|
| PRESIDENT ..... | WILLIAM J. HORTON ..... | (517) | 546-2159 |
| VICE PRESIDENT ..... | ARTHUR KALINSKI ..... | (313) | 871-5610 |
| SECRETARY ..... | FRANCES BUSH ..... | (419) | 729-3407 |
| TREASURER ..... | ELERY HOLT ..... | (419) | 882-2492 |
| PAST PRESIDENT ..... | THOMAS GIBBS ..... | (313) | 282-3745 |

CHAIRPERSONS:

| | | | |
|---|---|---|---|
| BIRTHDAY DISPLAY ..... | DOROTHY LOYD..... | (313) | 778-7271 |
| EDITOR..... | GEORGE JUDD ..... | (313) | 928-5660 |
| EDUCATION..... | BERNARD BUSH ..... | (419) | 729-3407 |
| HISTORIAN..... | VIVIAN RANDALL ..... | (313) | 935-1188 |
| HOSPITALITY ..... | DORIS MEDLEN ..... | (219) | 747-4985 |
| LIBRARIAN ..... | | | |
| MEMBERSHIP ..... | WILLIAM H. GARDINER ... | (517) | 655-3608 |
| PARLIMENTARIAN ..... | HAROLD RICE ..... | (313) | 463-5972 |
| RULES CHAIRMAN ..... | WILLIAM J. HORTON .... | (517) | 546-2159 |
| SHOW CHAIRMEN: ..... | ARTHUR KALINSKI ..... | (313) | 871-5610 |
| | JOHN TATE ..... | | |
| SPECIAL COMPETITION ..... | EDWARDS MYERS ..... | (517) | 624-9178 |

IF YOUR NAME , ADDRESS OR TELEPHONE NUMBER has been CHANGED OR IF YOU ARE LISTED INCORRECTLY, PLEASE CONTACT:

William H. Gardiner, Membership Secretary.
4518 Sandstone Drive
Williamston, MI 48895

**********

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
414 South Dort Hwy.
Flint, Michigan 48503

PHONE (313) 767-8881

$5.75 includes shipping and handling.

**********

# MEMBERSHIP INFORMATION for MIDWEST FACETERS GUILD

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.**

NAME: _____ ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE: _____ TYPE MACHINE: _____ TEACH: _____

[] New membership [] Renewel membership

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

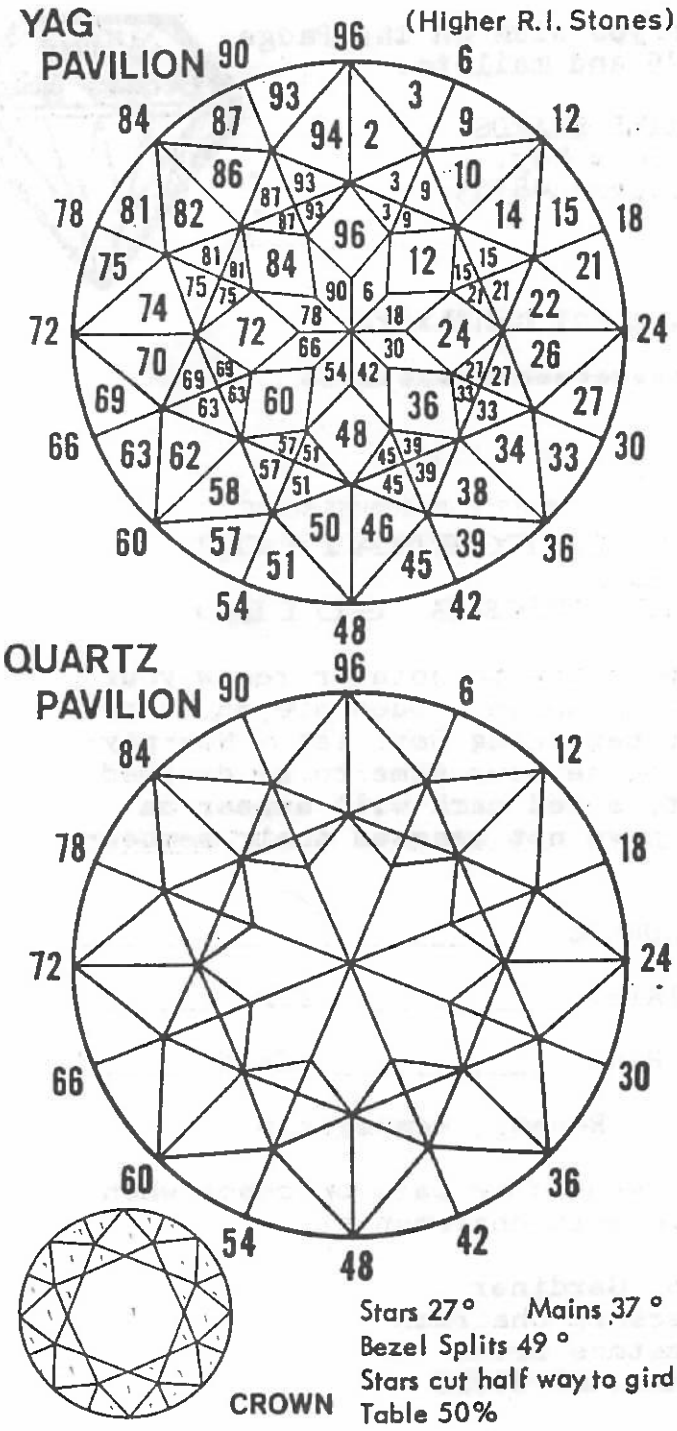
William H. Gardiner
MFG Membership Chairman
4518 Sandstone Drive
Williamston, MI 48895

# Sapphire FACETING GUIDE NO. 74

## ANOTHER PLAN FOR BEAUTY

### 'Pavilions Make the Difference'

SUBMITTED BY Doris Crawford




No one has come up with a more satisfactory cut than the crown of a standard brilliant. It is beautiful and neat, and if properly cut, will collect the brilliant rays from the pavilion and send them out through the crown with spreading dispersion. Of course we sometimes vary the angles of the crown to fit the size of the stone and it's refraction. We also split the facets on larger stones to bring out more spots of brilliance, but, all in all, it is the same good old standard crown.

| ANGLES | INDEX (YAG PAVILION) |
|---|---|
| 58° | 3 - 9 - 15 - 21 - 27 - 33 - 39 - 45<br>51 - 57 - 63 - 69 - 75 - 81 - 87 - 93 |
| 50° | 2 - 10 - 14 - 22 - 26 - 34 - 38 - 46<br>50 - 58 - 62 - 70 - 74 - 82 - 86 - 94 |
| 48° | 3 - 9 - 15 - 21 - 27 - 33 - 39 - 45<br>51 - 57 - 63 - 69 - 75 - 81 - 87 - 93 |
| 44° | 3 - 9 - 15 - 21 - 27 - 33 - 39 - 45<br>51 - 57 - 63 - 69 - 75 - 81 - 87 - 93 |
| 41° | 96 - 12 - 24 - 36 - 48 - 60 - 72 - 84 |
| 36° | 6 - 18 - 30 - 42 - 54 - 66 - 78 - 90 |

The pavilion, however, is something else again. Here is the place where, I think, a lot of improvement can be made. The standard pavilion is wonderful for a diamond or some other highly refractive stones, but most of our colored stones are not so highly refractive. Look straight down into the table and you'll find it is bright and beautiful, but tip it a little, and that big, old, dark, blank spot appears as all the light is lost out the back. So, here is a pattern, not perfect, but an attempt to remedy this situation. One can do much more tipping before that blank appear. I cut one in YAG and another, with different angles in QUARTZ.

| ANGLES | INDEX (QUARTZ PAVILION) |
|---|---|
| 55° | 3 - 9 - 15 - 21 - 27 - 33 - 39 - 45<br>51 - 57 - 63 - 69 - 75 - 81 - 87 - 93 |
| 53° | 2 - 10 - 14 - 22 - 26 - 34 - 38 - 46<br>50 - 58 - 62 - 70 - 74 - 82 - 86 - 94 |
| 50° | 3 - 9 - 15 - 21 - 27 - 33 - 39 - 45<br>51 - 57 - 63 - 67 - 75 - 81 - 87 - 93 |
| 48° | 3 - 9 - 15 - 21 - 27 - 33 - 39 - 45<br>51 - 57 - 63 - 67 - 75 - 81 - 87 - 93 |
| 43° | 96 - 12 - 24 - 36 - 48 - 60 - 72 - 84 |

Observe that with five or six rows of facets, the pavilion can become so deep that no reflection can reach the culet. This is overcome by crowding the angles close together.

The 36 degree angle is all right to use on YAG or other deep colored stone like garnet, but do not use this angle on most colored stones.

The four facets which together look like a kite, should lie about midway between the culet and the girdle.

I found this stone easier to cut by proceeding from the girdle to the culet, but that is for each cutter to decide.

# The MEASURE of HARDNESS

Mohs' scale can show that one mineral is harder than another, but not how much harder. A stone must be fairly durable where it fits into a mounting. If this weren't necessary, more minerals would be included in the list of gemstones. Many minerals can form in crystals. And many have the clarity, color and character which suggest use in jewelry. But most are too soft or fragile.

In 1822, Friedrich Mohs, a German mineralogist, divised a system to describe hardness. People have used, and complained about, this scale ever since. But, for practical purposes, no one has found anything better.

## THE SCRATCH TEST

The Mohs scale came from testing what minerals scratch what other minerals. Friedrich Mohs sought commonly available minerals. He chose each which seemed as much harder than the one below it as it was softer than the one above it.

Mohs worked out a scale running from 1 to 10. Talc, the softest substance he knew, was 1. Diamond, the hardest, became 10. Then, he filled in the eight gaps.

Number 9 was corundum or sapphire--the hardest stone, after diamond he could find. Sapphire scratched topaz as easily as topaz scratched quartz. So, topaz became 8 and quartz, 7. Feldspar and apatite--both fairly common--were 6 and 5. Then came fluorite 4, calcite 3 and gypsum 2.

Mohs probably knew the gaps between his numbers were not equal. He certainly knew calcite was softer on its c-face than on its rhombohedral cleavage face (which has the hardness of 3). A fingernail is said to have a hardness of 2 1/2. It easily scratches calcite's c-face.

Mohs knew the hardness of crystals changes with the direction. Though useful, his scale was at best an inexact way to express differences between minerals.

For this reason, most mineralogists don't use decimals to express in-between hardnesses. But they are often so stated. An ad may say a diamond substitute has a hardness of 6.5, rather than 6 1/2. Use of a decimal seems to imply greater accuracy than use of a fraction.

## THE PROBLEM OF CRYSTALS

Instruments which accurately measure hardness have existed for years. Most use a standard point which, under standard pressure, makes a diamond-shaped, dent in the test substance. The length and width of the dent are measured under a microscope. Then, they are compared with a chart. This chart provides a number on a hardness scale which may run from 1 to 1000.

A micro-indenter can give reliable hardness figures for uniform substances. It is fine for a metal, but poor for a crystalline mineral. The arrangement of atoms in a crystal varies. Atoms are more easily disturbed in one direction than in the other. Thus, two crystal planes won't give the same reading.

To get an accurate average figure for the hardness of a gemstone, we need a flawless, unstrained sample. We would cut it to allow accurate crystallographic orientation of the indenter's direction of pressure. Assume we had a shoebox shaped block. We would have to make two impressions at right angles to each other on each face. Such testing is too complex for most gemologists. The Mohs scale is more practical.

| | | MOHS' scale | WINCHELL, based on Knoops scale |
|---|---|---|---|
| GYPSUM | Hard Fingernail scratch. | 2 | 46-54 |
| CALCITE | PENNY scratches it. | 3 | 75-120 |
| FLUORITE | KNIFE blade scratches it. | 4 | 139-152 |
| APATITE | Hard Knife scratch. | 5 | 360-493 |
| FELDSPAR | STONE scratches blade. | 6 | 560 |
| QUARTZ | scratches GLASS | 7 | 666-902 |
| TOPAZ | Softest Precious Gem. | 8 | 1250 |
| CORUNDUM | Rubies and Sapphires | 9 | 1700-2200 |
| DIAMOND | Hardest stone on earth. | 10 | 8000-8500 |

Accurate tests by sclerometer, as the instrument described above is called, have been made on minerals. They show, as suspected, that the gaps between Mohs numbers are very inconsistent. Mohs' simple digits don't tell the real hardness differences between diamond and corundum or topaz or quartz.

## THE 'REAL' HARDNESS SCALE

In 1945, Dr. Horace Winchell made some tests with a pyramidal diamond indenter. He knew better mineral hardness figures were needed.

Knoop and Peters, who first described this instrument, had assigned the figure 8000 to diamond. Winchell used their scale as the basis for his work. Gypsum (Mohs' 2) ranged from 46 to 54. The exact number depended on crystallographic orientation and direction of the indenter.

Calcite (Mohs' 3) ranged from 75 to 120. Fluorite (4) ranged from 139 to 152. Knoop's tests showed apatite (5) ran from 360 to 493. Knoop also found albite feldspar measured 490 and orthoclase feldspar, 560.

Winchell said quartz (7) was 666 to 902. He assigned the number 1040 to topaz. Knoop had measured topaz at 1250. Winchell thinks his figure was low because of fractures.

Synthetic corundum is 9 on the Mohs scale. Winchell gave a reading of 1700 to 2200. Black silicon carbide, at 2850 to 3000, was harder than green SiC, at 2675 to 2825. But diamond, at 8000 to 8500, was way ahead.

The indenter used in the tests was also a diamond. Its orientation wasn't mentioned. So it would be almost impossible to duplicate the test, and its results. Thus, the figure has little real meaning. But it does prove, once again, that diamond is much harder than any other natural substance any synthetic yet made.

Continued on Page

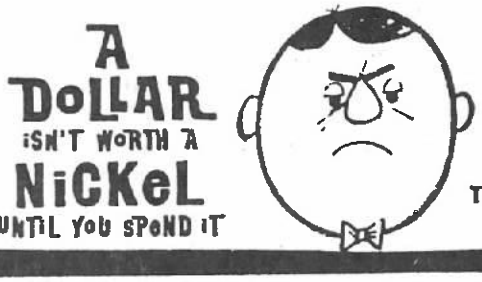
## FAMOUS DIAMONDS OF THE WORLD

| DIAMOND | WEIGHT IN ROUGH | LARGEST STONE CUT FROM IT (See foot note) | REPUTED VALUE |
|---|---|---|---|
| Cullinan | 3106 m.c. | 530.20 m.c. | $750,000 (entire stone) |
| Excelsior | 995.2 m.c. | 70 m.c. and 20 smaller stones | |
| Pres. Vargas | 726.6 m.c. | 48.26 m.c. | $750.000 (entire stone) |
| Jonker | 726 m.c. | 125.65 c. | $1,000,000 (entire stone) |
| Jubilee | 650.8 m.c. | 245.35 m.c. | |
| Orloff | (unknown) | 199.6 m.c. | $450,000 |
| Victoria | 469 m.c. | 184.5 m.c. | $100,000 |
| Regent | 410 c. | 140.5 m.c. | |
| Florentine | (unknown) | 137.27 m.c. | $750,000 |
| Star of the South | 261.88 m.c. | 128.8 m.c. | $400,000 |
| English Dresden | 119.5 c. | 76.5 c. | $200,000 |
| Kohinoor | (unknown) | 186 c. (original) 108.93 m.c. (recut) | $700,000 |
| Shah | (unknown) | 88.7 m.c. | |
| "Pigott" | (unknown) | 49 c. (?) | $200,000 |
| Nassak | (unknown) | 43.38 | $400,000 |
| Sancy | (unknown) | 55 m.c. | $100,000 |
| Star of S. Africa | 85.75 m.c. | 47.75 m.c. | $125,000 |
| Hope | (unknown) | 44.5 c. | $175,000 |

### UNAUTHENTICATED FAMOUS DIAMONDS

| | | |
|---|---|---|
| Great Mogul | 787.5 c. | 280 c. |
| Mattan | 367 c. | Uncut |
| Nizam of Hyderabad | (unknown) | 340 c. |
| Braganza | 1680 | |

NOTE: *The letters m.c. after the weight indicate metric carats. Other weights are those recorded before diamonds were weighed in metric carats.*




## The MEASURE of HARDNESS

Continued from Page

### IS IT SAFE TO WEAR?

Hardness isn't the only factor which affects a gemstone's resistance to wear. Cleavage is also important. If the cleavage is prominent, as in zoisite, topaz and diamond, its location can cause trouble. A zoisite cut so the cleavage lies at right angles to the table will be more of a problem than one where the cleavage is almost parallel to the table. Kunzite also has an easy cleavage. It is unsafe for hard, daily wear.

Some stones, however, wear well, although they are softer than kunzite or topaz. Jade is a very tough stone, though its hardness isn't great.

Other stones, which seem fairly hard, do not wear well. Emerald is a good example. Aquamarine, its blue counterpart, is fairly durable. But emeralds, unlike other members of the beryl clan are brittle.

Zircons are likely to chip in use. Thus, they are less popular than they once were. People were told they looked like diamonds. But, when worn like diamonds, zircons soon chip. YAG is a fairly hard stone. Both YAG and Fabulite are far less brittle than zircon. But, if banged around, they show the effects more than diamond will. And even a diamond can split.

In summary, the Mohs scale is inexact. But, it gives a relative figure which tells what stone is harder than what other stone. The gemologist is really the best judge of what wears well. He sees stones in use all the time.

Remember, if an ad says something has a hardness of 8.65287, ignore it. If the advertiser is being at all truthful, he really means it is a little harder than topaz and a little softer than sapphire. One advertiser claimed a diamond had a hardness of 13. He must fancy himself a 20th Century Mohs, starting a new hardness scale about which the rest of us have yet to hear.

Excerpts from Jeweler's Circular-Keystone

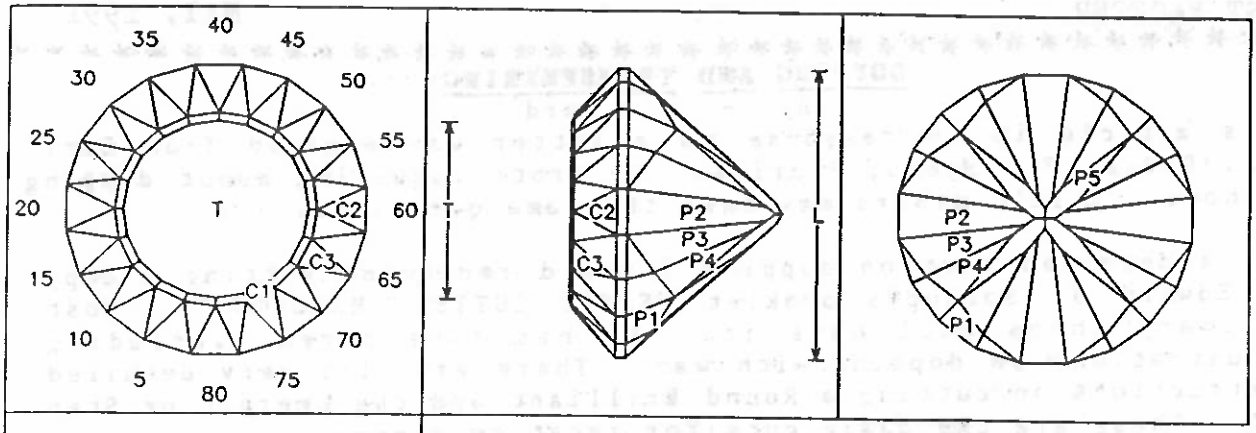
"This isn't exactly what I had in mind when I asked for a larger pay check, sir."

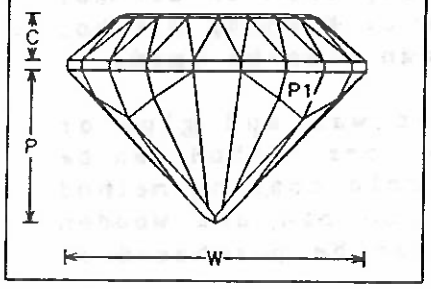
## The theories of polishing ...

The true nature of the polishing process is both a technical as well as a scientific problem, varying somewhat with each different type of gem material, and there are two points of view as to how polishing is achieved. (1) That the polishing process is merely a matter of very fine grinding which so reduces the presence of very fine parallel striations that the eye can no longer see them. The polishing of diamond is done in the same operation by which the facets are first ground. (2) That the polishing process in a great many substances other than diamond consists in the abrading of the surface in fineness by a combination of friction and heat so that a flow of the surface takes place. This has been ascribed to a combination of chemical action, local heating of minute high points of the material being polished with the polishing lap, and the molecular disturbance of atoms, causing the formation of an amorphous surface layer . . . the so-called and much debated Beilby layer.

The differences between grinding and polishing are sometimes very fine. For instance, it has been found that when a fine emery paper is backed with glass or a firm backing, it can impart only a dull finish, but, with a flexible backing, a polish can be achieved on certain materials.

As all cutting or grinding of gems is in effect a minute chip-removing process, polishing must be regarded as the end process in a progressive smoothing of the surface layer . . . that is, grinding with successively finer agents until the undisturbed base material is reached. □□□




# 20/20 VISION

## By Merrill O. Murphy

Angles for R.I. = 1.54
101 facets + 20 facets on girdle = 121
4-fold, mirror-image symmetry
80 index
L/W = 1.000 T/W = 0.615 T/L = 0.615
P/W = 0.520 C/W = 0.158
H/W = (P+C)/W+0.02 = 0.698
P/H = 0.746 C/H = 0.226

### GIRDLE

| | |
|---|---|
| 90.00 | 80 4 8 12 16 20 24 28<br>32 36 40 44 48 52 56 60<br>64 68 72 76 |

### CROWN

| | | |
|---|---|---|
| T | 0.00 | Table - Cut & Polish Oversize. (See Text) |
| C1 | 20.00 | 2 6 10 14 18 22 26 30<br>34 38 42 46 50 54 58 62<br>66 70 74 78 - To reduce table to 61.5% of width. |
| C2 | 42.00 | 80 4 8 12 16 20 24 28<br>32 36 40 44 48 52 56 60<br>64 68 72 76 - To even girdle line and chevrons at C1<br>length = 2 times width |
| C3 | 40.25 | 2 6 10 14 18 22 26 30<br>34 38 42 46 50 54 58 62<br>66 70 74 78 - To girdle. - Reduce C1 to rectangles. |
| C4 | 18.00 | OPTIONAL Cut same as C2. - Changes C1 to 40 tiny triangles.<br>Recommended only for stones over 12*mm* diameter. |

### PAVILION

| | | |
|---|---|---|
| P1 | 60.00 | 4 8 12 16 24 28 32 36 - To fix girdle width.<br>44 48 52 56 64 68 72 76 |
| P2 | 47.00 | 80 20 40 60 - To girdle. |
| P3 | 46.80 | 1 19 21 39 41 59 61 79 - To girdle at P2. |
| P4 | 44.70 | 5 15 25 35 45 55 65 75 - To meet P3. |
| P5 | 41.00 | 10 30 50 70 - To junction of P4's. |

## DOPPING AND TRANSFERRING

By - Sid Word

This article is in response to a letter we received from Earl M.L. Davis, Ft. Myers, Florida. He wrote inquiring about dopping methods. I felt others may have the same questions.

For a detailed text on dopping I would recommend getting a copy of Edward J. Soukup's booklet "FACET CUTTERS HANDBOOK". Most lapidary shops will have it. It has five pages, including illustrations on dopping with wax. There are also very detailed instructions on cutting a Round Brilliant and the Emerald or Step cut. These are the basic cuts for faceting stones.

Back to dopping; grind a flat spot on the rough where your table will be. Dop and stone must be very clean. Dip them in alcohol and wipe with a clean tissue. Use ethyl, wood or burning alcohol (not rubbing). Methanol and shellac thinner can also be used.

There are two basic methods of dopping; hot wax and glue or cement. If the stone is not heat sensitive, either method can be used. If the stone is heat sensitive then a cold dopping method should be used. For VERY sensitive stones you can use wooden dops and Elmer's Glue or water glass (which can be purchased at most drug stores) as the cement.

The wax used for faceting has a higher melting point than that used for cabs and general lapidary work. It comes in square or round sticks and small sheets. They also come in several colors. Some faceters claim to have an improved-bond if they dip the stone in liquid shellac before the wax step (allow it to dry before proceeding). The wax, stone and dop must all be at about the same temperature. The temperature at which the wax is soft enough to form. Do not let the wax burn or scorch as too much heat causes it to lose holding power.

As a heat source I use an alcohol lamp. They are available at most rock shops and jewelry supply houses. You can also use a small torch or an electric heat lamp.

To avoid burning your fingers, while heating the dop, cut a three inch length from a broom handle and drill a hole in one end slightly larger than the diameter of your dops.

The stone can be held in tweezers over the flame to warm it. Be careful, some stones such as tourmaline and opal are very heat sensitive. Or make an oven by cutting the side out of a large juice can. Put the lamp inside and the stones on top. By the time you have applied wax to the dop, the stone should be heated enough to fasten to the dop.

The dop should be about two thirds the diameter of the finished stone. With practice, you can eyeball the stone so that it is pretty well centered on the dop. If it is critical, I put the dopped stone in the quill of the faceting machine and check for centering at 90 degrees on the lap.

For the transfer step and some heat sensitive stones I use five minute, two part epoxy. One recommended brand is DURO manufactured by Loctite Corporation. Follow the instructions on the package, except I mix in about an equal amount of cornstarch. The purpose of the cornstarch is to stiffen the epoxy so that it doesn't run too badly. It also swells when you heat the dop to remove the stone.

A third method of dopping is to use the cyanoacrylate super glue. Once again dop and stone must be clean. The dop must be perfectly flat and you must have a flat to dop to. Cyanoacrylate does not fill cracks. There are some new thicker cyanos. such as Hot Stuff Special T; there are also accelerators. The bond is microscopically thin and happens in about fifteen seconds. One of the difficulties is that you will not have time to shift the stone. I have used the super glue to re-attach a wax dopped stone when it was knocked off the dop prematurely.

I prefer to dop the rough with wax and transfer with epoxy. The reason is that the wax dopped stone can be shifted easily to center it better, or to remove a blemish in the rough. Epoxy transfer avoids the chance of shifting. I have had stones shift even with the wet tissue wrapping. Some faceters make a wax impression of the stone and then use epoxy or super glue. After the transfer, removing the crown dop can usually be done by heating dop enough to break the wax or glue bond. You can also immerse the crown dop in attack or acetone in a closed jar.

Once you find a system or combination of systems which works for you, stay with it. "PRACTICE MAKES PERFECT".

Everyone has a stone come off the dop once in a while. If the stone comes off unexpectedly, look for clues to the original alignment. Wax is usually easy to repair by rebonding with the super glue. Modeling clay, Plasticene or Duxseal can be used to hold a stone in alignment while re-dopping. If before you started, you made a reference mark on the girdle area with a fine indelible marker or a brass or aluminum point you are both smart and lucky.

Before I go the the transfer step I will drop to 89 degrees and will polish a reference line on the top and bottom of the stone (96 index and 48 index). This also gives me a reference for alignment of the stone in the faceting machine as I start cutting the crown.

Make sure that your transfer block is in alignment and that the the groves are clean. Also check your dops to be sure they have not been bent or damaged.

It is a good idea to pair your dops so that they are the same diameter. If one is larger or smaller than the other you will have a problem. Make sure the cone or V is deep enough to not make metal to stone contact at the point (culet) of the stone. The cone can be made deeper with a small drill.
VIA Columbia-Willamette "Facets", November, 1990

Sapphire FACETING GUIDE NO. 38

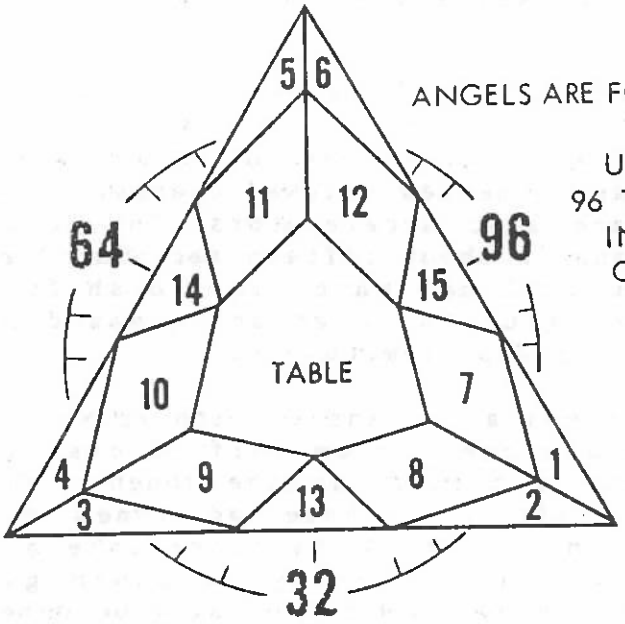
# Minority Cut

by Jo Anne Sisco

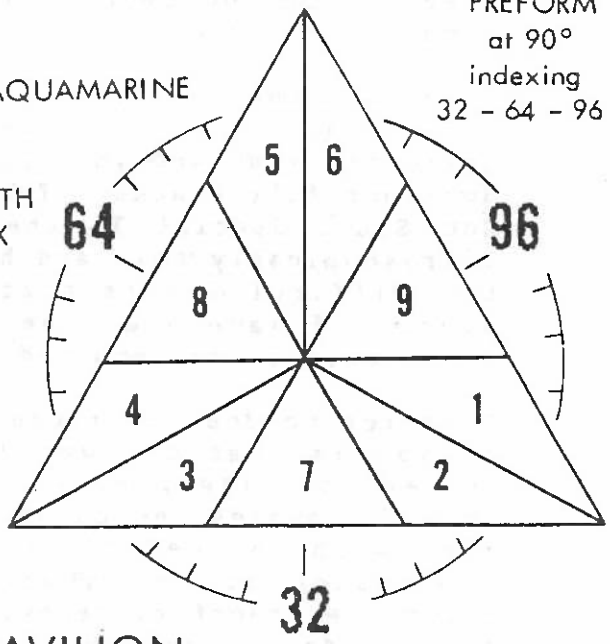
3655 Stonehaven • Florissant, Missouri 63033

ANGELS ARE FOR AQUAMARINE

USE A 96 TOOTH INDEX GEAR




PREFORM at 90° indexing 32 - 64 - 96




## CROWN

Cut six facets (Nos. 1-6) at 43°
indexing 4 - 28 - 36 - 60 - 68 - 92

Cut six facets (Nos. 7-12) at 39°
indexing 4 - 28 - 36 - 60 - 68 - 92

Cut three facets (Nos. 13-15) at 46°
indexing 32 - 64 - 96

Transfer to 45° dop and cut table.

Polish in same order as cut.

## PAVILION

Cut six facets (Nos. 1-6) at 42°
indexing 4 - 28 - 36 - 60 - 68 - 92

Cut three facets (Nos. 7-9) at 44°
indexing 32 - 64 - 96

Polish in same order as cut.

## GIRDLE

Polish girdle at 90° indexing 32 - 64 - 96

The "Minority Cut" was developed by Jo Anne Sisco 'For those forgotten few who practice the fine art of faceting'. Material used, Beryl - Aquamarine. Darker stones may be used if you cut a shallower pavilion.

This cut has a minimum number of facets. It is a goo cut for those odd shaped gems that are laying arour and just hate to cut because we would waste too muc material in preforming.

| HERE IS AN AID TO MEMORIZING MOHS SCALE OF HARDNESS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| TALC | GYPSUM | CALCITE | FLUORITE | APATITE | FELDSPAR | QUARTZ | TOPAZ | CORUNDUM | DIAMOND |
| THAT | GEM | CONTAINS | FEATHERS | AND | FLAWS | QUIZ | THE | CUTTING | DEPARTMEN |

# Gem Identification By Color

When white light strikes a transparent gemstone according to the composition of the material, certain wave lengths of light may be absorbed, and those emerging unaltered give the stone its apparent color. If all colors except red are absorbed, the stone appears red. Gems such as alexandrite, which passes red and green about equally, will appear red or green according to which color predominates in the light by which they are viewed. In daylight, which includes more green and blue than red, the stone appears green. Under incandescent light, where red predominates, it will appear red.

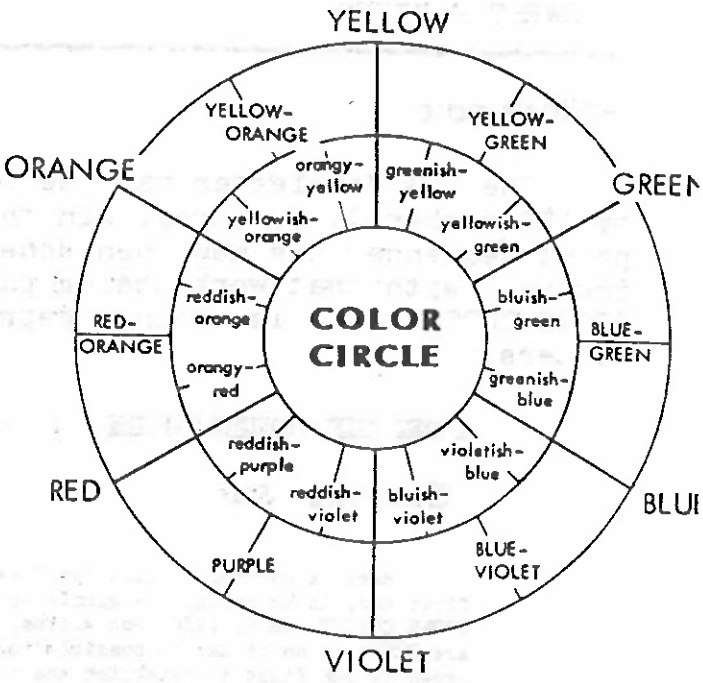
Whatever the gem's color it is often necessary to name or describe that color to another person. Using a gemstone color nomenclature such as straw yellow, honey-yellow, lemon-yellow, citron-yellow, brass-yellow and bronze-yellow can be misleading. Many people rely on the color circle approach (illustration) to actually convey a color meaning from one person to another. The sections of the wheel are: red, orange, yellow, green, blue, and violet.

To describe those colors fully, use the terms HUE, TONE, and INTENSITY, calling them the three dimensions of color.

HUE is any color other than white, neutral gray or black. Red green, blue, blue-green and bluish green, etc., are hues.

TONE is the value of a color, its degree of lightness or darkness, described as very light, light, medium, dark or very dark.

INTENSITY is the comparative brightness or dullness of a color, its vividness or its dullness. The degree to which it is vivid or grayed-out. Such as bluish-green of low intensity. Intensity is a term less easily described in words than are hue and tone. Intensity is the degree of color brightness that is apparent when a particular color is seen by reflected light. For instance, the difference between ordinary show-card colors (paints) and the




new fluorescent paints used for sign painting. Both ordinary and fluorescent paint can be the same hue (red), and the same tone (medium), but one will seem much brighter, and more vivid than the other. It will be brighter, and therefore, the more intense. Its intensity would be said to be very high.

A hue between blue-green and blue, is called greenish-blue. Between blue-green and green it is called bluish green, indicating a little blue, a lot of green. Purple is a color not seen in a rainbow but is often seen in nature. On a color circle it is shown at a point half way between red and violet.

## Color Contrasts and Harmonies

Contrasting colors are those on opposite sides of the color circle. Such as red and green, or purple and yellow-green.

Harmonious colors are those adjacent to each other, or near each other, on the color circle. Orange and red are in harmony.

Complementary color. Hues on opposite sides of the color circle. When mixed together will produce neutral gray.

Neutral gray. A mixing of black and white, or a gray completely without any tinge of color.

Other terms sometimes applied to colors: PALE, used to describe a hue of light or very light tone. DEEP, described a strong color, of medium tone and high intensity. RICH, a color of dark tone and high intensity. SHADE, dark to medium in tone. TINT, lighter than medium in tone. WARM colors include the purples, reds, oranges, yellows, and yellow-greens. COOL colors are the greens, blues, and violets.

Some facts about color pigments may be of interest in our discussion about color and gems. As relating to pigments, the primary colors are red, yellow, and blue, colors that cannot be made up by combinations of other colors of the spectrum. But all other colors can be made by combining two of the primaries.

Secondary colors are those that can be made by combining an equal parts mixture of two of the primaries. Blue and red result in purple. Yellow and blue will make green. Yellow and red will make orange. If the three primary colors are mixed equally, black will result.

Accepted names for very low, low, and medium-low intensities of the following colors are: RED - reddish-brown, red-brown, brownish-red. ORANGE - orangy-brown, brown-orange, brownish-orange. BLUE - bluish-gray, blue-gray, grayish-blue. GREEN - greenish-gray, green-gray, grayish-green.

Certain mineral names are often used in color descriptions of other minerals: ALMANDINE - a hue of red near purple-red. CHRYSOLITE - greenish-yellow to yellow-green. HYACINTH-yellow-orange to yellow-green. PADPARADSCHA - orangy-yellow to orange. RUBY - red to purplish-red. SAPPHIRE - blue to violet-blue.

A few of the most common colors of the best known gems: AMETHYST - violetish to reddish-purple. AQUAMARINE beryl - light blue to bluish-green. CARNELIAN quartz - brownish-orange to brownish-red. CITRINE quartz - greenish-yellow to red-brown. CHRYSOBERYL - yellow to greenish-yellow, yellowish-green. EMERALD beryl - green to bluish-green. HELIODOR or golden beryl - light yellow to light yellowish-orange, yellowish-green. MORGANITE beryl - light red-purple to light purple-red. PYROPE GARNET - intense yellowish to purplish red. RHODOLITE garnet - violetish-red. ROSE QUARTZ light red to violet-red. RUBY - red to purplish-red. SAPPHIRE - blue to violetish-blue. SARD QUARTZ - reddish-brown to brown. TOPAZ - yellow to light yellow, orangy-yellow.

## editor's note

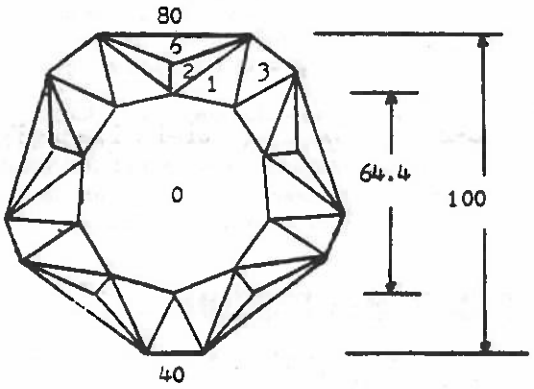
The TFG Newsletter ran the first publication of the Czarine Star, by TFG member J. B. Tardy, in the April 1981 TFG Newsletter. A meet point sequence has now been done by Bob Long of Mercer Island, Washington, with that work being published in the October 1981 issue of STONE CUTTER. It is being reproduced here for the use of the TFG members.

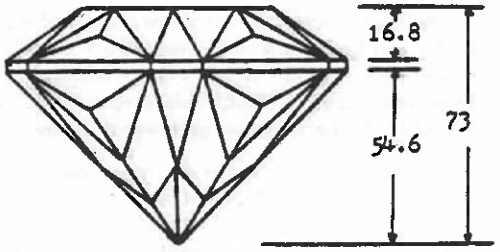
A MEET POINT SEQUENCE FOR THE -

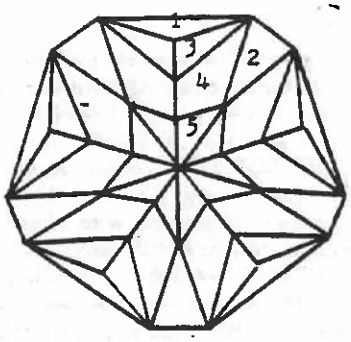
### Czarina Star

by Bob Long
Mercer Island, WA

Here is another "upside down" meet point sequence in which the crown is cut first and, in so doing, the girdle outline is established. See also Hypothesis Oval, STONE CUTTER, July, 1980. Bob writes, "If the facets outlining the table of a stone are ECED*, then it may be possible to arrive at a meet point sequence where the crown is cut first to establish the outline". The complete meet point sequence is given below followed by a complete "recipe" for cutting the crown.




**CROWN**

| STEP | ANGLE | INDEX |
|---|---|---|
| C-0 | 0° | TABLE |
| C-1 | 39.5° | 02-14-18-30-34 46-50-62-66-78 |
| C-2 | 42° | 01-15-17-31-33 47-49-63-65-79 |
| C-3 | 42° | 08-24-40-56-72 |
| C-4 | 90° | 16-32-48-64-80 |
| C-5 | 90° | 08-24-40-56-72 |
| C-6 | 49° | 16-32-48-64-80 |

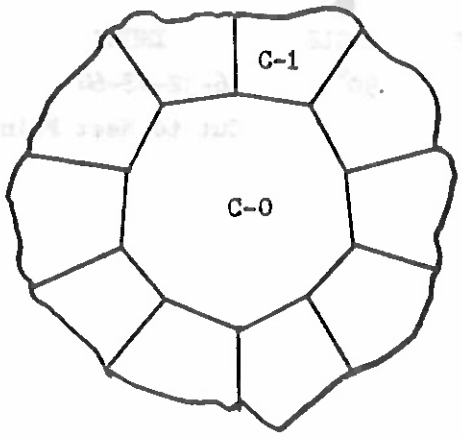
**PAVILION**

| STEP | ANGLE | INDEX |
|---|---|---|
| P-1 | 57° | 16-32-48-64-80 |
| P-2 | 50° | 08-24-40-56-72 |
| P-3 | 51° | 01-15-17-31-33 47-49-63-65-79 |
| P-4 | 49° | 02-14-18-30-34 46-50-62-66-78 |
| P-5 | 43° | 04-12-20-28-36 44-52-60-66-78 |

* ECED stands for Equal Center to Edge Distance. It is a technique originated by Norm Steele of Seattle WA. For a discussion of ECED and a design example see ECED TRAPEZE B by Norm Steele, STONE CUTTER, September, 1980.

continued next page

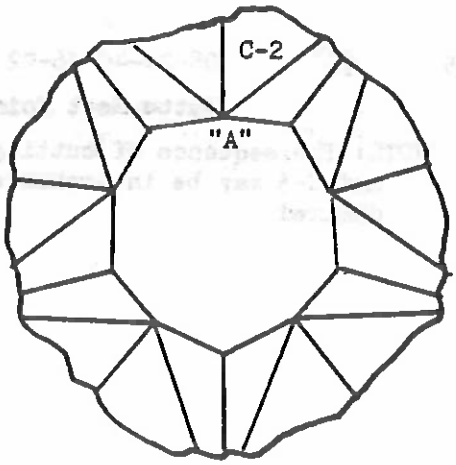
CZARINA STAR - con't.




CROWN

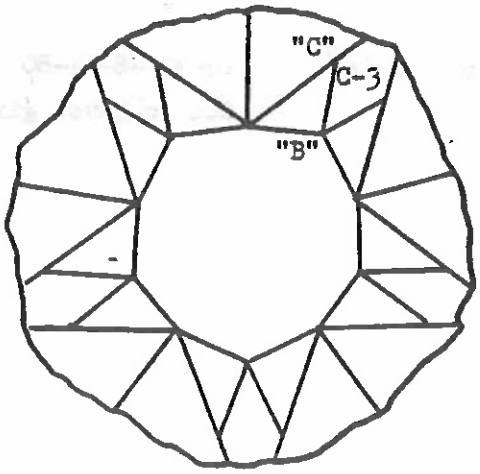
| STEP | ANGLE | INDEX TABLE |
|---|---|---|
| C-0 | 0° | |
| C-1 | 39.5° | 02-14-18-30-34<br>46-50-62-66-78 |

The table size, established in this step, determines the overall size of the finished stone. The table is 64% of the stone diameter, L.




| | | |
|---|---|---|
| C-2 | 42° | 01-15-17-31-33<br>47-49-63-65-79 |

Cut to Meet Point "A".




| | | |
|---|---|---|
| C-3 | 42° | 08-24-40-56-72 |

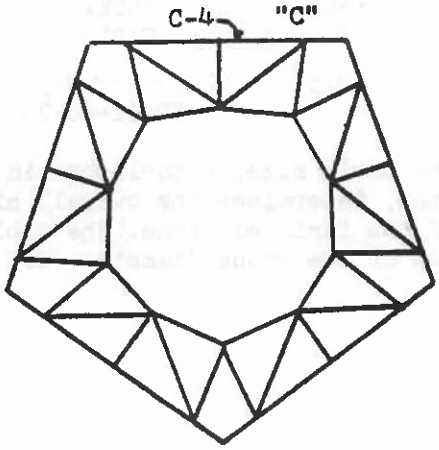
Cut to Meet Point "B".

Form Meet Point "C".

NOTE: The sequence of cutting C-2 and C-3 may be interchanged if desired.

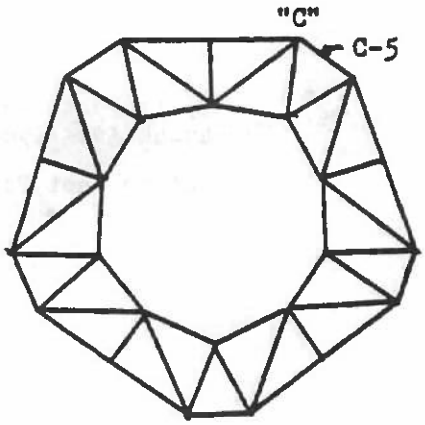
continued next page

CZARINA STAR - con't.




| STEP | ANGLE | INDEX |
|---|---|---|
| C-4 | 90° | 16-32-48-64 |

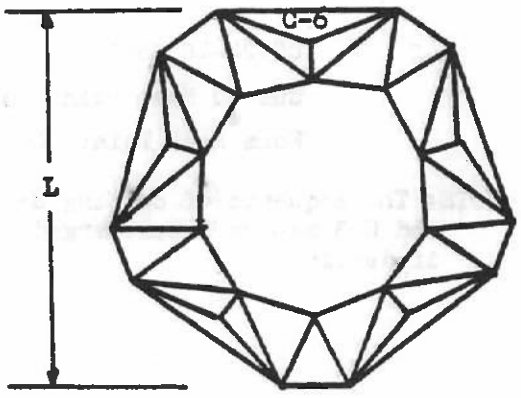
Cut to Meet Point "C".




| | | |
|---|---|---|
| C-5 | 90° | 08-24-40-56-72 |

Cutto Meet Point "C".

NOTE: The sequence of cutting C-4 and C-5 may be interchanged if desired.




| | | |
|---|---|---|
| C-6 | 49° | 16-32-48-64-80 |

Cut to level girdle.

# SPINEL

BY WALTER E. JOHANSEN
Dealer in Natural and Synthetic Facet
Rough, Imported and Domestic.

Many historical Red Spinels of large size are in crown jewels, museums and private collections. Included are the "Timur Ruby" of 361 carats, "Black Prince's Ruby" estimated 170 carats, a stone of over 400 carats in the Kremlin, U.S.S.R. A red spinel of 71.15 carats is in the American Museum of Natural History. Red Spinels of over 5 carats are not common. Possibly the reason spinel is not better known is they were erroneously given such names as "Balas Ruby," the public thinking of the specie as a variety of ruby, not realizing spinel is a distinct specie.

Spinel is found with corundum (ruby and sapphire) and although the crystals are distinctive, worn red crystals are often misidentified by the miners.

Similar to garnet, spinel is composed of a group, several types comprising the series.

The types that provide gemstones are the magnesium aluminum spinel, blue gahnospinel, dark tourmaline green gahnite, black, pleonaste and dark green to black, pickotite. Red spinels range from ruby red to dark garnet red. Intermediate colors are light purplish red to pink to rose. Other colors are purple to red purple, blues, dark blue, violet blue, greenish blue. The blues are not intense - colors often being "greyed out." Orange spinel ranges from yellow orange to orange red. This is also called "flame" spinel and is the most sought and valuable color variety. Natural colorless spinel is rare. Alexandrite-like spinel (greyish blue in daylight - amethystene violet under artificial light) is a rare variety.

Probably the rarest variety of spinel is star spinel, only 10 stones are known (6 ray star with 4 rays at the girdle similar to 6 ray garnet).

Synthetic Spinel is made in a wide range of beautiful colors but with the exception of the rare red synthetic almost all the colors imitate other species such as sapphire, tourmaline, peridot, aquamarine.

Spinel is single refractive so there is no problem of orienting rough for the best color. The refractive index is about 1.72 for natural, close to 1.73 for synthetic. Hardness is 8, toughness is good. It is not sensitive to heat.

Spinel, both natural and synthetic, frequently cuts with a pitty surface. It is necessary to remove the pits in the polishing operation. Allow ample room to remove material and still obtain good facet "meets." Good lap and polish combinations are a well scored tin lap with Linde "A" or tin oxide polishing powder on a typemetal lap. Linde "A" is also satisfactory. Recently I polished a large table facet with a "pellon" lap and Linde "A." However this lap should only be used on the table facet as it has a tendency to round the facet edges. The rounding is removed when the crown facets are cut. The usually recommended cutting angles are crown 37 degrees, pavilion 42 degrees. Critical angle is about 36-1/2 degrees.

Natural spinel is a comparatively rare stone. Small pieces of rough of up to about two carats are usually available from faceting rough dealers. Sizes over two carats will take a more diligent search. Synthetic boules of spinel are usually about 20 mm. in diameter and 60 mm. in length and range in weight from 200 to 400 carats. Price is usually around three cents a carat for the synthetic. Clean, natural material is from $1.00 a carat and up depending on the size and color.

Principal sources for spinel are Burma, Ceylon, Cambodia, and Thailand.

For a Free Price List of Faceting Materials
write to Mr. WALTER E. JOHANSEN
Route 1, Box 225 (Sycamore Avenue)
Morgan Hill, California 95037

Dear Faceters:

The birthstones listed on the face of this brochure were obtained from a late issue of The Jewelers Master Magazine Circular-Keystone.

| | |
|---|---|
| January | *The* **Garnet** *is credited with endowing the wearer with constancy and fidelity;* |
| February | *The* **Amethyst** *betokens sincerity;* |
| March | **Aquamarine.** *courage and truthfulness;* |
| April | **Diamond.** *innocence;* |
| May | **Emerald.** *happiness;* |
| June | **Alexandrite** *or* **Pearl.** *health and long life;* |
| July | **Rose Ruby.** *a contented mind;* |
| August | **Peridot.** *happiness;* |
| September | **Blue Sapphire.** *wisdom;* |
| October | **Tourmaline** *or* **Opal.** *hope;* |
| November | **Topaz.** *fidelity;* |
| December | **Zircon** *or* **Turquoise.** *prosperity and success.* |

This Article "History of Birthstones" compliments of George E. Carlson, Minneapolis, Minnesota.

# Sapphire FACETING GUIDE NO. 79

## "The Diana"

Submitted by - Michael R. Cichocki

22329 St. Gertrude
St. Clair Shores, MI 48080

USE A 96 INDEX GEAR

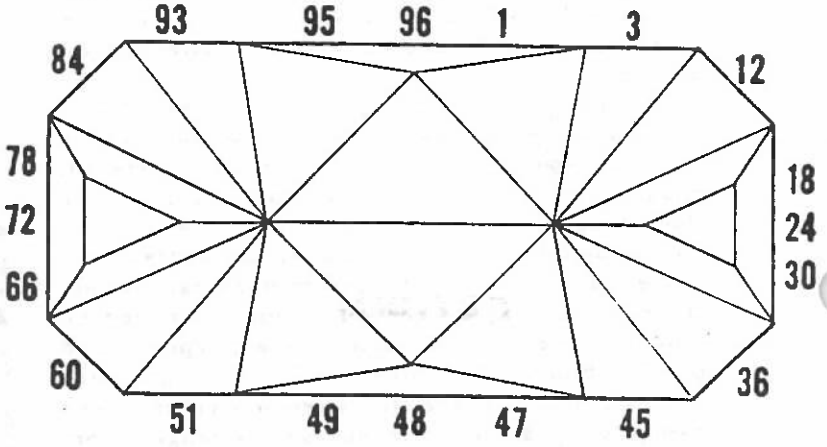
ANGLES ARE FOR QUARTZ

| ANGLES | INDEX |
|---|---|
| 90% | 96-48-24-72<br>12-36-60-84 |
| 43%<br>43%<br>43% | 12-36-60-84<br>96-48<br>24-72 |
| 43 1/2%<br>43 1/2% | 93- 3 45-51<br>78-66 30-18 |
| 43% | 47-49 95- 1 |
| 47% | 96-48 Polish In |
| 42% | 96-48 Polish In |
| 70% | 72-24 |
| 48% | 72-24 |

Polish in reverse order of cutting

Mr. Cichocki recommends cutting the Pavilion first.

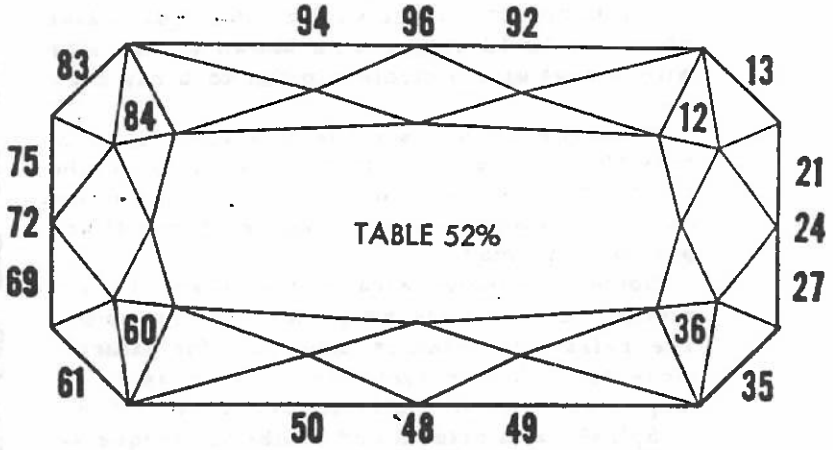
### PAVILION




| ANGLE | INDEX |
|---|---|
| 42%<br>42%<br>42% | 12-36-60-84<br>96-48<br>72-24 |
| CUT IN TABLE 70% OF THE WIDTH & POLISH | |
| 42% | 2-50-46-94 |
| **Stars** | |
| 37 1/2%<br>37 1/2% | 1 CL 1/2 49 CL 1/2<br>95 CR 1/2 47 CR 1/2 |
| 31% | 69 & 75 CL 1/2<br>21 & 27 CR 1/2 |
| **Girdles** | |
| 45 1/2%<br>45 1/2% | 1 CL 1/2 - 49 CL 1/2<br>47 CR 1/2 - 95 CR 1/2 |
| 46% | 71-74-23-25 |
| 45% | Polish In 83-35-13-61 |

Polish in reverse order of cutting

### CROWN




12 X 18 mm. will finish 10 mm. thick

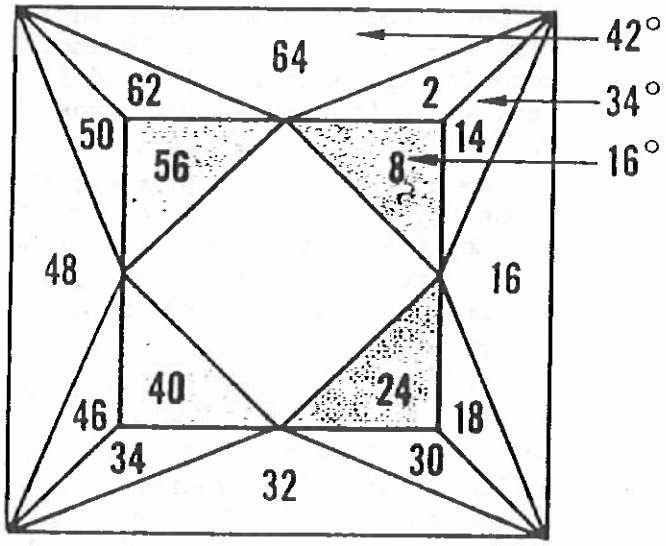
Proportion 1/3 Crown 2/3 Pavilion the girdle must be 2 1/2 to 3 mm. thick after cutting the pavilion.

# Sapphire FACETING GUIDE NO. 27

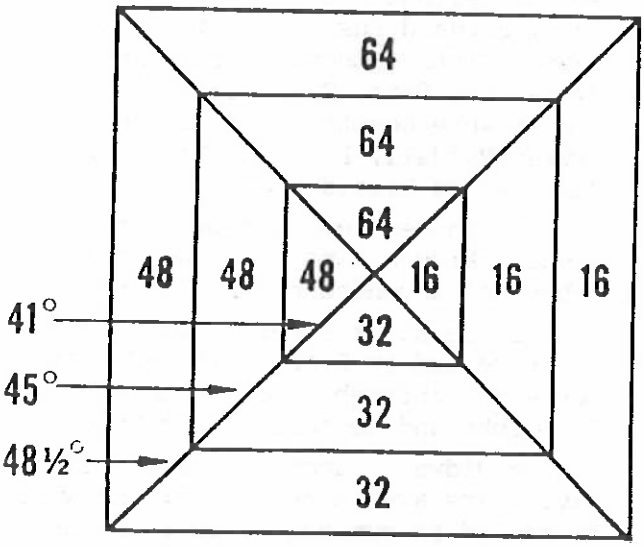
## The Simple Simon

submitted by Eduard Werner
c/o Arrow Profile Company
P. O. Box 38
St. Clair Shores, Mich. 48080

ANGLES ARE FOR QUARTZ
USE 64 TOOTH INDEX GEAR




CROWN




PAVILION

| FACETS | INDEX | ANGLE |
|---|---|---|
| MAINS | 64 - 16 | 42° |
| | 32 - 48 | 42° |
| MAIN STARS | 62 - 2 | 34° |
| | 18 - 14 | 34° |
| | 34 - 30 | 34° |
| | 50 - 46 | 34° |
| TABLE STARS | 56 - 24 | 16° |
| | 40 - 8 | 16° |

| FACETS | INDEX | ANGLE |
|---|---|---|
| GIRDLE | 64 - 16 - 32 - 48 | 48½° |
| MIDDLE | 64 - 16 - 32 - 48 | 45° |
| CULLET | 64 - 16 - 32 - 48 | 41° |

This is the four sided "Simple Simon." I kept the crown rather high with a consequent smaller table (about 40% of the width of the stone).

The facets on the pavilion are all of an equal distance or width.

*All men are born equal;*
*the tough job is to outgrow it.*

Dear Faceters,

I found an old piece of quartz among a lot of other stuff, and being rather lazy (just getting home from Florida where it froze half of the time) I fashioned a stone which I call "Simple Simon."

This cut is a conventional four star with an additional four table stars that reach to the middle of the crown.

The pavilion has three steps equally divided, thus making this an easy gem to cut. Try it, and let me know your results.

As Ever The Prof

## SECRETARY'S MINUTES

The Board of Directors of the Midwest Faceters Guild was called to order at 10:26 AM on March 23, 1991 in the Library of Williams School in Flint, Michigan by President, William Horton. Those in attendance were Bill Horton, Arthur Kalinski, Elery Holt, Frances Bush, Bernard Bush, William Gardiner, Thomas Gibbs, Joseph Manina, Edward Myers, Don Sahr, Gail Sahr and John Tate. Absent were Dorothy Loyd, George Judd, Vivian Randall, Doris Medlen, June Ramshaw and Harold Rice.

The Minutes were accepted as published through a motion made by Tom Gibbs and seconded by Art Kalinski.

The Treasurer's report was accepted as presented by Elery Holt and filed for audit through a motion made by Tom Gibbs and seconded by Ed Myers.

The Midwest Faceters Guild will have Gears available for 25¢ and will be mailed to members if they include a business-sized-self addressed-stamped envelope with their order. Bill will write an article in The Faceter with details.

Books written by Dave Miller will go on sale and the proceeds will go into the Scholarship established in his memory.

OLD BUSINESS:

SHOW - The revised Show Budget of $10,000 was presented by Art Kalinski and was accepted by the Board. Demonstrations will be set up in the Hallways and two rooms will be available for Hospitality, two rooms for Judging and two for speakers. The Speaker programs are scheduled at 1:00 PM on Saturday and 3:00 PM on Sunday. Joe Manina will take flyers to the Michigan Highway Department for distribution to the various Rest Areas. A Mailing list will be available from Joyce Hanschu and the Mailing packets will be assembled at the August meeting. Everyone is asked to distribute flyers to their local clubs and areas by placing them in the appropriate places. Art Kalinski has purchased the chain for the Emerald & diamond necklace.

Bill Horton called attention to the error in our Rules & Regulations for our Show Competition. Due to the error the Lozenge cut will be accepted for Class 14 in either Natural or Synthetic Material to avoid confussion.

Our Incorporation Papers have been misplaced and need to be located. We were Incorporated in 1979 and if you know where they might be, please let Bill know.

Tom Gibbs will obtain the rates and phone number of the Quality Inn Fairlaine (formerly Fairlaine Inn) for those wishing to make reservations for our November 15, 16, 17, 1991 Show.

NEW BUSINESS:

The Dearborn Civic Center is available October 30, 31 and November 1, 1992 for our Show. A motion was made by Tom Gibbs, "That the Treasurer be instructed to pay the deposit when the contract is received for October 30, 31 and November 1, 1992" Motion was seconded by Bernard Bush and carried.

Art Kalinski stated that our Show dates are now published in the "Lapidary Journal".

Bill Horton received a letter from the Seaman Mineral Museum to appoint a Liaison from the Guild. After discussion, it was decided to drop the issue because of the Membership being extended over a large part of United States and Canada. Most of support the Museum through our other local clubs. Seaman Museum is now the Official Mineral Museum of Michigan. A motion was made by Ed Myers,"That the Board turn it down." Motion was seconded by Bill Gardiner and carried.

A letter was received from the American Federation explaining they have established a Visa Credit Card. The Board decided we did not wish to get involved.

The 1992 Federations Show will be held in Brunswick, Ohio July 22thru 26. Our Guild will maintain a booth and exhibit the Birthstone cases.

Jane Matz of Michigan Geological and Gemcraft Societies (MGAGS) sent a letter requesting the Guild help sell their

(NEXT PAGE, PLEASE)

SECRETARY'S MINUTES (cont'd)

raffle tickets for 20% of the sales. This would probably conflict with our raffle so it was decided not to participate.

Terry & Marie Hueizing sent a flyer for the Cincinnati show to be held at the Cincinnati Gardens on May 4th & 5 th. Cash prizes are being offered for The Best Minerals of the midwest; The Best Minerals of the United States and The Best of World Wide Minerals.

Nettie DuSold sent maps for the meeting place (Wildwood Inn) of May 11th. Hotels in Michigan City , Indiana are: Holiday Inn; Red Roof Inn; Knights Inn; Travel Inn Motel and Super 8 Motel. All are located in the area of 421 and 94.

A large Champaigne color CZ is being offered for sale to members of the Midwest Faceters Guild. Ed Myers made a motion, A- to offer it to Members for the original price of $100 - B- if no one buys it, use it as a special raffle item with a minimun number of tickets or C- cut it for the raffle or donate it to theBirthstone cases". Bill Gardiner seconded the motion and it carried. Bill Horton will publish rules as to how it will be disposed of.

Joe Manina gave Dorothy Loyd three pieces of Gilson Opal to be used for the Birthstone cases. The opal was donated by Millers a long time ago.

The meeting adjourned at 11:35 AM, through a motion made by Bill Gardiner and seconded by Elery Holt.

Respectfully submitted,
Frances Bush, Secretary.

**********

The March 23, 1991 Membership meeting of the Midwest Faceters Guild was called to order at 1:10 PM by President, Bill Horton in the Library of Williams School, Flint, Michigan with 45 Members in attendance.

The Minutes were accepted as published in "The Midwest Faceter" .

Treasurer's report was accepted and filed for audit as given by Elery Holt through a motion made by Tom Gibbs and seconded by Ed Myers.

The next meeting is May 11th in Michigan City, Indiana. A map and list of motels will be in this issue of The Midwest Faceter.

Ed Myers reminded the Membership of the Australian-United States Competition. He encouraged everyone that is able to enter the competition. The Northwest Faceters Conference in Mt. Vernon, Washington has a five stone competition. See Ed Myers for information.

Bill Horton, Assistant Rules Chairman, explained there was an error in the rules for the Lozenge cut. Class 14 entries will be accepted with either Natural or Synthetic material.

Show Chairman, Art Kalinski stated seventeen dealers have been committed to the Show. Although we have paid Security on the floor for the duration of the Show, many volunteers are needed to assist. Please notify Art or John Tate if you are able to help and what you would like to do. Floor plans are made. John Lauri, GG & ASA will speak on Diamonds and Appraising Gems and Jerry Call will give two lectures on Brazilian Gem Stones and Mining.

Flyer packets will be prepared for mailing at the August meeting. Everyone should help advertise the Show by placing flyers throughout their area as flyers are the best form of advertising.

For those interested in making motel reservations for our November 14, 15 & 16, 1991 Show the name of the Fairlaine Inn has been changed to Quality Inn Fairlaine Inn. Number and rates will be available from Tom Gibbs.

NEW BUSINESS:

The Dearborn Civic Center will be available the last weekend in October for our 1992 Show.

Kathleen Myers is Chairman of the Competitve Exhibits and Members that qualify are needed to volunteer to be Judges. Single Stone entries will be judged before the Show opens to ease the burden of judging.

Historian, Vivian Randall needs material for the Archives Book. Everyone is requested to bring a picture (or mail it) of themselves with your

(NEXT PAGE, PLEASE)

SECRETARY'S MINUTES (Cont'd)

name on the back and where it was taken.

Bill Horton suggested a list be made of all Members entering in Competition and the Awards they receive. Kathleen Myers has a list of all those that have entered our Shows. She encouraged everyone to enter at least one stone in competition as she pointed out it is one of the best ways to find out what is right or wrong with your cutting.

NEW BUSINESS:

Dorothy Loyd will reserve the Mt. Clemens Recreation Center for the weekend of August 9th or 16th for our Faceting Seminar. Kathleen Myers, Dorothy Loyd and Bill Horton will help with the details. Participants will be divided into four Divisions: 1- Those that have never cut a stone (limited to 10 to 12 persons as machines available are limited); 2- Fairly Novice, having cut only a few stones; 3- Advanced cutting and 4- Faceting Design or a Very Advanced Class. Persons of Advanced and Master Facetors are needed to teach or help teach.

Bill Horton will write a series on Designs & Facets for the "Lapidary Journal", at the request of Merle Burke. Bill won First Place in the American Gem Cutters Cabachon Competition. He also entered Faceting Stone of the Best New Design and received a score of 100% but they judged the design was too difficult for the average facetor, so First Place went to the person scoring 98.8 for the simplicity of his design.

Nine of the replicas of the Famous Diamonds that were cut for the Field Museum were brilliantly on display. Hopefully the rest will be finally be completed before the next meeting.

The weight and size of the Champaine CZ that is being offered for sale to the Membership will be listed in the bulletin to give everyone a chance to purchase it.

Dorothy Loyd purchased a 9.22 carat Blue Zircon and a piece of rough blue Sapphire for the Birthstone Cases. She is in need of Sapphires of all colors, especially pink; rubies and a good sized peridot. Bill Horton donated a large peridot that will be cut by Tony West. The Birthstone Cases will be Exhibited at the American-Midwest Federations Convention in Brunswick, Ohio, July 23rd thru 26th in 1992. Set up for the Show will be on Wednesday and Dorothy will need eight to ten people to help her. John Gansen has volunteered to transport the cases. Bill Horton will contact the Rules Chairman to see if the three cases may be entered as one Exhibit in Competition.

Bill Horton told of his delightful experience of being a guest of Leo Stevens on the Reservation in Arizona. Special permission was granted to him and four others by the Tribunal Council.

Mr. Horton encouraged everyone that has a display of 20 or more stones to enter the Federation Competition, especially those that have received a Midwest Trophy.

Meeting adjourned at 2:12 PM through a motion made by Gail Sahr and seconded by Bernie Bush.

Respectfully submitted,

Frances Bush, Secretary.

**********

● D U E S A R E P A S S E D D U E ! ! ●

THIS SET OF LABELS WAS PREPARED APRIL 1,1991. If a RED DOT appears on your label and you have paid your dues after that date, please disregard the Red Dot. Thank You!

MIDWEST FACETERS GUILD MEETING - MAY 11, 1991

WILDWOOD INN COUNTRY RESTAURANT

ROUTE 20

MICHIGAN CITY, INDIANA

HOSTED BY

FACETORS FORUM

BOARD MEETING 10:00 A.M.

REGULAR MEETING 1:00 P.M.

Wildwood Restaurant is located on Route 20 at I-94 and 20 Junction. Go East on 20 , about 3/4 Mile. Left (North) side of Road.

****

For Motels get off at Route I-94 and U.S. 421 (EXIT 34-B) and turn Right. All are in same area.:

HOLIDAY INN Phone (219) 879-0311
Located on Highway 421, one block North of Interstate 94 and three miles North the Indiana Toll Road.

KNIGHTS INN Phone (219) 874-9500
201 West Kieffer Road (THE BUSHES & HOLTS ARE STAYING HERE!)
Located at I-94 at U.S. 421 Exit 34-B

RED ROOF INNS Phone (219) 874-5251
110 West Kieffer Road
Located at I-94 at U.S. 421 North, (Exit 34-B)

SUPER 8 MOTEL Phone (219) 879-0411
5724 S. Franklin

TRAVEL INN MOTEL Phone (219) 872-9441
3944 S. Franklin St.
Located on U.S. 421 - 1 mile North of I-94 & 3 miles North of I-90 at U.S. 421 & Hwy. 20

****

CAMPING

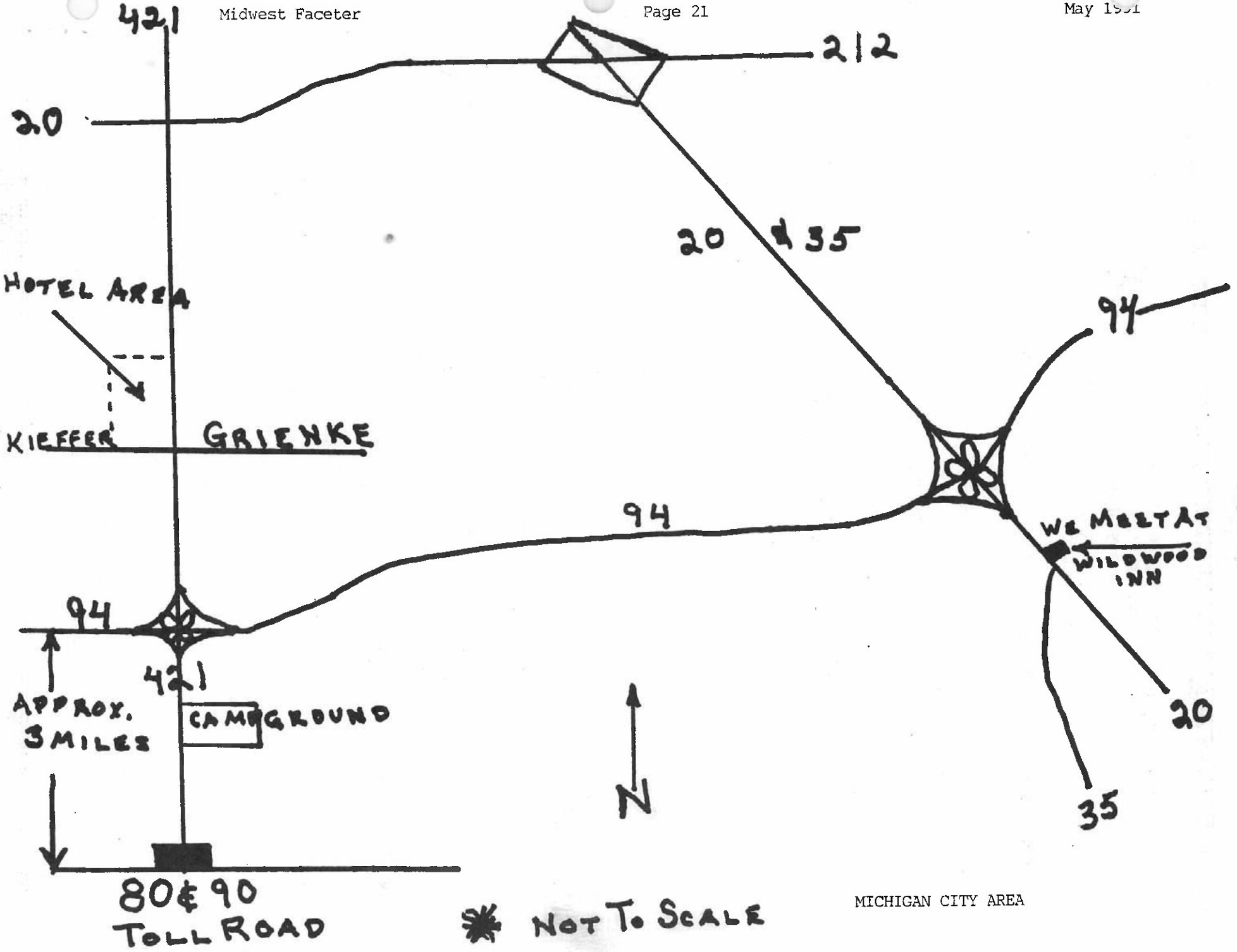
MICHIGAN CITY KAMPGROUND (Formerly the K O A Camp Grounds)
1601 N. U.S. 421
Phone (219) 872-7600

From Indiana Tollroad - (I 80-90) North 3 Miles on U.S.421

From - U.S. 20 - South 3 Miles on U.S. 421 or 1 Mile South of I-94- U.S. 421 Exit.

Rates: $14.00 - Water & Electric
$16.00 - Water, Electric & Sewer
$1.25 for each additional person over two.

PLEASE DO YOUR BEST TO ATTEND AS THIS GROUP HAS PUT A LOT OF WORK INTO HOSTING THIS MEETING




MICHIGAN CITY AREA