

# The Midwest Faceter

*A Publication of The Midwest Faceters' Guild, October 2012*

## Midwest Faceters' Guild Seminar 2012

By Barb Yost, Seminar Chair

What an event, I don't know about the rest of the instructors but I was exhausted Sunday night,

It was a good exhausted caused by an exciting and successful seminar.

We had 10 beginners, Robert Hoppe Shannon Hoppe Gene Goldsand Arnie Ford Myron "Mike" Kesterke Max Lautzenheiser Scott Lowran Scott Scoles Jill Kozak and Raymond Johnson. A big thank you to Melvin and Dave for instructing, Four of these had their own machines. I really enjoyed seeing Scott's saffire machine and Gene's with his Jarvis head. I had not had experience with either of these machines before so it was good for me to see. All ten students finished their stones and they all turned out amazing. Some had a couple extra facets, but every one sparkled. It sure was a fun group, I certainly enjoyed everyone!

It was great to have Tyler Miller here from North Carolina to work with our Advanced students. We had four in the group Virginia Steele Larry Uphaus Amy Uphaus and Joe Masterson.

I know they learned a lot, I saw some patterns being studied and explanation of l/w, ri, and other pattern information being discussed. I understand some care and maintenance of machines was discussed and one watering can was repaired. I heard laughter and love in that corner of the room.

Another traveler, Everett Brake came from Columbus Ohio to teach GemCad. He had one student Blake Glupker and I understand they had a good time and learned a lot. I also was able to learn some things from GemCad. Everett was able to show me how a the pavillion of a stone would be cut based on the pattern steps. I love to learn!

Linda Badger had one student, Ruth Ann Lehner, in her beading class. It looked like they were having a great time. I saw a cabochon beaded and I believe I saw a glass being all glammed up with beads.

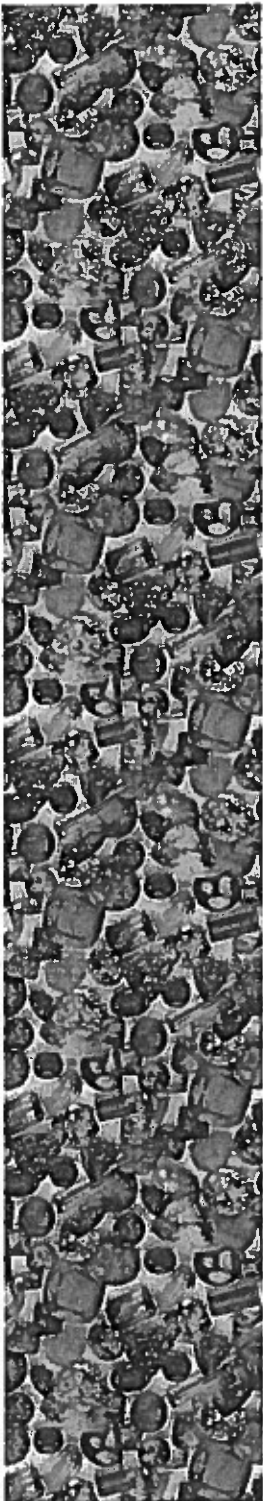
A huge thank you to Ruth Ann for taking time to get food organized for all the meals and for the cleaning up after us. Thank you to all who brought food and drinks to share, it was greatly appreciated.

I appreciated Barb Miller taking care of the lap sign out's, making sure the guild equipment was all returned in good order.

It was great having the Demerly's with us. They brought along a great selection of natural and man made rough. Also a selection of faceting tools and accessories. I enjoyed Dennis talk after the meeting, it sure was well thought out and informative. I think it gave us all a new insight in the gem world and the dealers world. Thank you both for being with us.

Thank you to everyone who helped set up, tear down and clean up. It was an amazing seminar thanks to everyone. Financially we did well. Our income was: **\$1295.00**, (beginners \$950.00, advanced \$200.00, Gemcad \$95.00 and beading \$50.00) Pur cost were **\$410.03** (Hall rental \$150.00 Food \$118.23 Certificates & beading patterns \$82.80 Gem Cad Books \$59.00). We were able to bank **\$884.97**.

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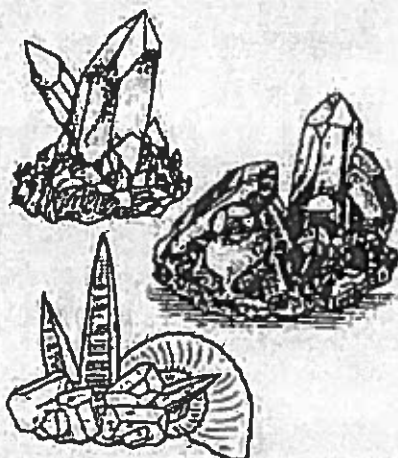
# Central Michigan's 47th Annual Gem, Mineral, Fossil Lapidary & Jewelry Show

**Friday, October 26, 2012 • 6:00 to 9:00 p.m.**  
**Saturday, October 27, 2012 • 10:00 a.m. to 7:00 p.m.**  
**Sunday, October 28, 2012 • 11:00 a.m. to 5:00 p.m.**

**"Main Arena" Ingham County Fairgrounds  
 700 E. Ash St. • Mason, MI**

## DEALERS

- Archy's Rock Shop
- BJ'S
- D. Demerly's Rocks & Artworks
- S&S Gold & Diamond
- J C Pearls
- M & W Minerals
- Moorehead Enterprises
- Red Metal Mineral Co.
- Russell's Trees & Treasures
- The Mineral House
- The Stones & Bones Collection
- The Agate Lady



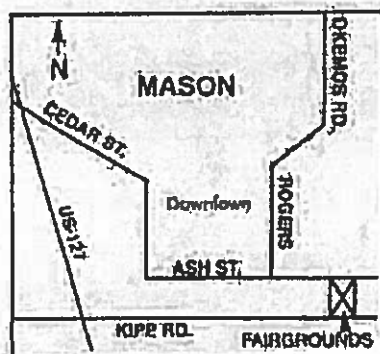
**NEW FEATURE  
 "ASK US"  
 Specimen ID - Limit 3**

## ACTIVITIES

- Club & Guest Displays
- Silent Auctions
- Hourly Door Prizes
- Fluorescent Booth
- Working Demonstrations
- Supervised Swap Table
- "Children's" Table
- Raffle
- Petoskey Stone Polishing
- "Touch & Feel" Table
- Refreshments
- Free Parking
- Much More

**ADMISSION: Adults \$3.00 • Teens \$1.00  
 Children Under 12 - FREE with Paying Adult**

*Part of proceeds  
 fund scholarship  
 at MSU*



## Directions to Show:

**FROM I-96** South on Okemos Rd.  
 To Mason, Left on Rogers St.  
 Left on Ash St.  
**FROM LANSING** South on Cedar St.  
 To Mason, Left at 2nd Stoplight (Ash St.)  
**US-127** South to Kipp Rd. Exit,  
 Left (East) to South  
 Entrance to Fairgrounds



**Sponsored by: CENTRAL MICHIGAN LAPIDARY AND MINERAL SOCIETY**  
 Information: (517) 641-6125 • facetman60@yahoo.com michrocks.org

**Meeting Minutes – August 11, 2012****Submitted by Ruthann Lehner, Secretary**

President Linda Badger brought the meeting of Midwest Faceters' Guild to order at 5:35 p.m. At Talmadge Hall in Grand Rapids, Michigan. A welcome to everyone and thank yous went out to all the teachers at the seminar: Barb Yost, Melvin Lehner, Tyler Miller, Dave Root and Everett Brake ...Linda herself taught beading, Everett taught GemCad, Barb, Melvin, Tyler and Dave taught faceting.

Treasurers' report read, motion made by Barb to accept the report. Seconded by Dave Root. Motion carried.

Secretaries' report.....Dave Root made a motion to accept the report. Seconded by Virginia Steele. Motion carried.

First of all we want to thank Linda Badger for filling in as editor for the past few months. "Thank you Linda!!".

Linda reported that Willie Lee and herself attended the wirewrapping class at Alice and Grit Turners'. Thank you Turners for inviting us.

Turners are also hosting a free frat at their home on September 29<sup>th</sup> from 9:00 am - 5:00 pm. Bring your own lunch and machine and have a good time. This is for members only. The class is limited in size to 10 people with machines so get your RSVP in early!! Linda Badger would be the one to contact for that event.

Midwest Faceters' annual meeting will be held at 11:00 at the Mason Fairgrounds, Mason, MI. This is in conjunction with the Central Michigan Lapidary and Mineral Society. A light snack and drink will be provided. Please be on time, this will be a short meeting and we will be voting on election of officers. Please come and support the Guild in decision making for the upcoming new year.

Melvin stated that the yearly audit of the treasurers' books is needed. Dave Root volunteered for the job. Barb made a motion for the books to be audited and for Dave to audit them. Motion seconded by Joe Masterson. Motion carried.

There was discussion about a donation of some of the stones that the older faceters of the Guild once donated for display purposes being donated to the American Federation of Mineralogical Society for a scholarship. Everett made a motion to keep the stones for display purposes only. Seconded by Barb Yost. Motion carried.

Anyone who would like to facet and donate a stone to the scholarship may do so. Linda Badger is tabling the discussion on this until next meeting..

Discussion on no insurance on trailer. Dave made a motion for Melvin to look into insurance for the trailer. Barb seconded the motion.....carried. Melvin will report back at next meeting.

Membership Chair.....badges are in and are available for purchase. An order for badges has been placed for pick up in October. No new orders will be available until next year.

You may also start paying your dues for next year. Remember if your dues are not paid by Jan 31<sup>st</sup> your newsletter will stop. Dues are \$20.00 for one person, \$30.00 for a family.

Virginia Steele made a motion to have next years' seminar at the same place as this year. Dave Root seconded the motion. Motion carried. Next years' dates will be...August 16<sup>th</sup>, 17<sup>th</sup>, and 18<sup>th</sup>, 2013.

President Linda Badger adjourned the meeting.

After our meeting we had a lasagna dinner. Thank you Linda for coordinating this, it was delicious.

President Linda Badger introduced our speaker for the evening. Dennis Demerly, of Demerlys' Rocks and Art Works. Dennis gave a talk on gemstones from "way back til today", and handed out information on manmade materials that resemble natural gemstones. Dennis is registered by the Jewelers Board of Trade.

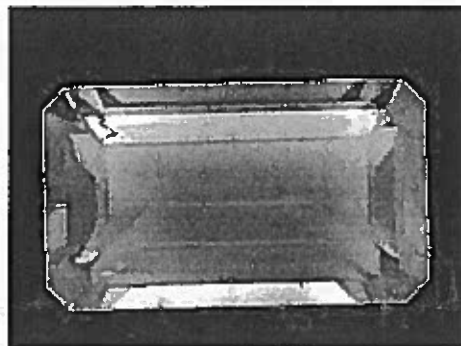
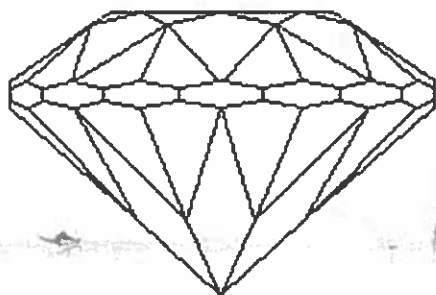
## International Gem Society Article

By Don Clark, CSM

Reprinted from the February 2012 issue of Meet Points, Vancouver Island Faceters Guild.

There are two basic styles of faceting. If you look at the round brilliant diagram, you will see it has triangular and kite shaped facets.

## Round Brilliant Cut

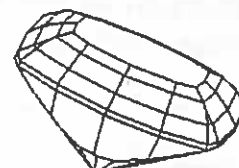
Step  
Cut

This style is called a brilliant cut. ... A step cut features rectangular shaped facets neatly arranged, one on top of the other. An "emerald cut," a cut cornered rectangle, is the most common example of a step cut. ... These styles are often combined. The Ceylon cut has a step cut pavilion and a brilliant cut crown. This is an ancient technique and one still used in Sri Lanka today. Modern computer studies have shown that the reverse, a step cut crown over a brilliant cut pavilion, will often produce the greatest brilliance. ... The barion cut was developed by South African diamond cutter, Basil Watermeier. Essentially, it is a method of putting a round brilliant pavilion into a fancy shaped gem. It usually has a step cut crown as well. This usually results in far greater brilliance than other methods. Interestingly, Mr. Watermeier discovered this just before the advent of computer ray tracing programs.



Rose Cut

The round brilliant pavilion, compared to other pavilion shapes, offers greater discipline of the light inside the gem. Barion cuts emit a fountain of light effect that is quite striking! Some gems combine faceting and cabbaging. A gem with a faceted top and a flat bottom is called a rose cut. Occasionally you will see a gem with a faceted pavilion and a domed crown, but this is not a standard method of cutting.

A cushion shaped barion cut  
with brilliant pavilion and

## Cut Names

There are standard cuts that we all recognize, like round brilliants and emerald cuts. Most faceted gems are simply called by their shape. However, you need to recognize that there are many variations within each shape. A triangular gem can have several or few facets; lots or little brilliance and scintillation.

Then there are other traditional, but less common, cuts with distinctive names. A good example is the Portuguese cut. It has several tiers of facets, which creates a wonderful display of light.

It has more scintillation than almost any other cut. As you can see from the picture, it requires many facets and requires considerable labour. That, plus the fact that the rough must have more than normal depth, makes it something that is used only occasionally.

## Triangular Cuts



Portuguese Cut

different point of view. He added about one-quarter teaspoon of graphite (white or black) to a spray bottle containing an ounce of alcohol which he sprayed onto the lap, rubbing it in with a lint-free wipe. The process prevents a squealing sound from the lap and provides a lubricant for the diamond grit he then sparingly sprayed on the lap. Don Rogers<sup>7</sup> uses a similar approach; a carpenter's pencil provides the graphite.

Douglas Turet<sup>8,9</sup> has outlined his method of preparing a ceramic lap before polishing. He describes its composition as consisting of Aluminum oxide mixed with high-temperature glass, the production version resulting in a porous material with closely-packed needle-like crystals with points facing upward; hence the need to prepare the lap. The aim is to remove those points so that the only particles in contact with a gemstone to be polished are those of our chosen diamond mesh. He directs us to use a half-boule of synthetic corundum, holding the curved side to one's coarsest lap and grinding a flat surface about half as wide as the boule itself. Repeat the process on finer laps washing the boule thoroughly after each lap until you have an easy-to-hold polished slab of the synthetic stone. After washing your hands with a nail brush ensuring that there is no chance for any contaminant to reach the disk, spray the still lap three or four times with 100,000 mesh diamond without adding any lubricant save a spritz or two of isopropyl alcohol. Next, use your also washed, burnishing block to smear the still wet diamond spray over the entire lap using circular motions from centre to outer edge. Then turn your faceting machine on at a medium speed (350 rpm) and lightly touch your prepolished corundum boule to the lap surface using both hands to hold the stone. Turet asserts that you will feel a "catching" or "dragging" sensation. Holding on to the boule, occasionally pump a small amount of diamond onto the moving surface until the surface of the lap has attained a "slightly misty" pre-polish. He describes the correct texture as that of a "well-worn porcelain sink," or "smooth Formica® counter top under a dry finger tip... almost waxy, but smoother." It takes about ten to forty-five minutes, at which point the milling action has been completed and the ceramic surface sufficiently broken in. A thorough wash with a 3M® plastic sponge and detergent to remove completely all the diamond grit, swarf and residual corundum completes the process leaving, "a dead flat surface, with ample pores still accessible to the polishing compound particles." Let the lap air-dry. Place the dry lap on the platen and tighten the fastener; accelerate the lap, gradually increasing the speed to around 500 rpm. Pump two or three sprays of the 100,000 mesh diamond. Then, with a folded-over piece of tissue or paper towel (Douglas prefers Bounty® "Select-A-Size" towels) using moderate pressure, sweep the spinning lap from centre to rim to remove the excess diamond.

The lap is now ready to polish a stone, preferably synthetic corundum, be it ruby, sapphire or fancy colour. Turet views the Falcon Lap™ as having a finer surface than those made by Crystallite® and others. The Graves Company®<sup>10</sup> insert which accompanies a new lap advises us to prepare the lap by washing it and then spraying it with diamond grit; they recommend their own formulation of diamond and extender. Alternatively, they suggest using a flat piece of synthetic corundum, rubbing it by hand until a polished surface emerges. They view diamond paste and graphite as contaminants of their Falcon Lap™.

Jack Slevkoff<sup>11</sup> of Gemworld itemizes a procedure similar to that of Douglas Turet:

1. Scrub the ceramic lap with dry Lava® soap.
2. Wash the lap with a stiff nylon brush, rinsing and removing all the soap and debris. Let the lap air dry.
3. Spray 50,000 or 100,000 grit diamond evenly across the lap surface from a distance of a few inches.
4. Work the diamond into the lap with a piece of corundum using firm pressure taking time to ensure the entire surface has been thoroughly covered.
5. Scrub the lap again with Lava® soap and a nylon brush; rinse thoroughly and air dry.
6. Coat the lap with white vinegar and let the acid evaporate.
7. Place the ceramic lap on the faceting machine and fasten into place. Run the lap at a moderate speed and spray twice with the same diamond spray. Wipe the lap clean with a piece of Kleenex® or similar material.
8. Polish your stone. A white cream may accumulate on the leading edge of the facets. If not, apply more diamond. Don't use too much spray though.

Ralph Mathewson<sup>12</sup> and the late Art Kavan<sup>13</sup> use a Norbide® lap dresser and 50,000 or 100,000 mesh diamond respectively, much as Slevkoff and Turet apply a corundum boule to prepare the ceramic lap. Ralph then charges the lap with 200,000 grit diamond suspended in light extender oil. He uses Super Lube Teflon® oil in tiny quantities (one-half to three-quarters of a drop touched in several places over the lap) and spreads the suspension with a razor blade while the ceramic revolves at the lowest speed possible. He permits the lap to dry overnight and may put more diamond on the lap to extend the polishing time. If he needs to use the lap sooner, he waits twenty minutes before polishing.

Broadfoot and Collins<sup>14</sup>, our Australian fellow faceters offer a thoughtful perspective:

*Some ceramic laps need breaking in with a large piece of corundum but most come ready for use. If the ceramic lap is shiny you must remove the glaze to prevent diamond polishing compound balling up and scratching while polishing.* They suggest that one use a sheet of plate glass, a scrubbing hand block and 600 grit diamond powder spread on the glass. They wet the diamond with a short spray of a wetting compound (automotive ignition dewatering spray). Using

The Graves Company<sup>10</sup> people suggest a similar approach to cleaning their Falcon Lap<sup>TM</sup> while Raytech<sup>®4</sup> staff note that a glazed lap can be restored using a coarser diamond grit on the disc before cleaning and recharging the ceramic. In my earlier presentation<sup>18</sup> I described the care of laps in some detail using Lava<sup>®</sup> soap or other detergents with or without a 3M<sup>®</sup> Scotch-Brite<sup>®</sup> pad.

Jerry Newman<sup>5</sup> cleans a contaminated ceramic lap with liquid soap and a small hand-brush. Jack Slevkoff<sup>11</sup> prefers plain alcohol. Ralph Mathewson<sup>12</sup> describes cleaning a ceramic lap of surface build-up causing scratches while polishing. He uses a razor blade facing into the lap turning at the *slowest* speed holding the blade so that most of the build-up is removed. He strongly advises not to try this procedure on any other lap material. Art Kavan<sup>13</sup> and our Australian colleagues, Broadfoot and Collins<sup>14</sup> scrub debris-laden laps thoroughly with detergent and a brush, using plenty of water. The latter suggest that one can remove the source of a scratch "by lightly smearing the spinning lap with undiluted dishwashing detergent and dragging the lap clean with a folded paper tissue." I suspect restoration of the polishing diamond compound may then be required. Similarly, Don Cameron<sup>17</sup> uses a 3M<sup>®</sup> ScotchBrite<sup>TM</sup> non-scratching pad and Dawn<sup>®</sup> dish detergent. He rinses the lap thoroughly, then dries and stores it in a plastic lap container. I use re-sealable plastic bags for most of my own laps. Wilf Ross<sup>19</sup> refreshes his ceramic disc when polishing with diamond and Teflon oil by running a piece of chamois over the surface.

### Conclusions

1) Ceramic laps may be used directly, or variably prepared by gradually increasing diamond grit sizes, each rubbed in with a polished synthetic corundum boule. The glaze on new laps may require removal or be a workable surface; that aspect is unclear. I suggest that the reader try his lap, and depending on its response, prepare it with one of the above methods or break it in with the first stone or two being polished.

2) All who have written about polishing with a ceramic lap offer similar advice: -- Use tiny amounts of diamond and extender; wipe the lap with a no-lint material to remove any excess; too much diamond leads to scratches.

-- Most faceters who use the ceramic lap prefer between 50,000 and 200,000 diamond grit. 100,000 is most commonly used.

-- Rotate the lap at very low speeds, usually under 100 rpm, or polish by hand on a still lap.

-- Be aware of the risk of overheating.

-- Check for tiny scratches; they may indicate too much diamond on the lap.

3) Last year<sup>18</sup>, I summarized caring for laps in general. My own description, which I share with others above, applies to the ceramic lap. Lava<sup>®</sup> Soap serves well, as do detergents and 3M<sup>®</sup> sponges or brushes to clean ceramic laps. Plastic bags or lap containers are a good way to protect and keep this lap from contamination.

I would like to thank Bill Orlowski and Alwyn Lawrence for their helpful contributions to this presentation. I value their friendship and guidance both.

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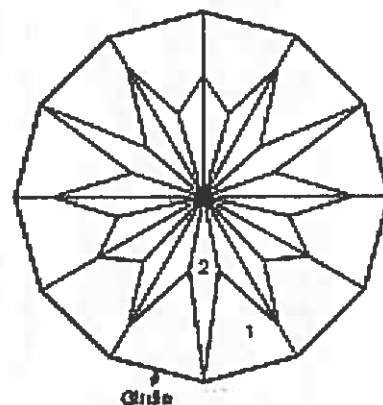
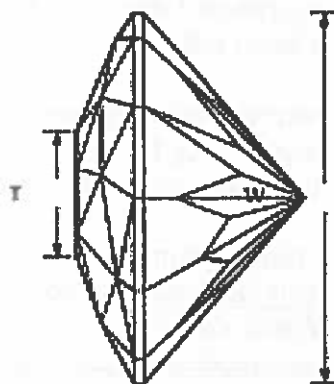
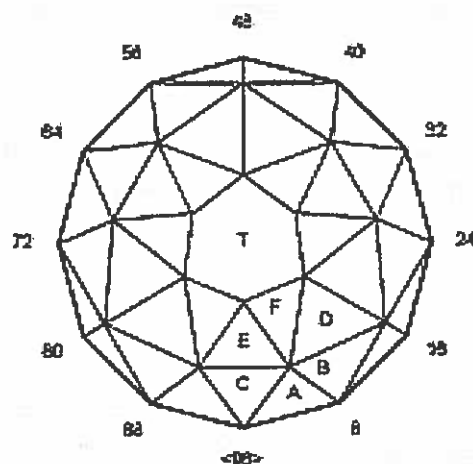
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**SnowBall**

by John Bailey, 2007

Angles for R.I. = 1.540

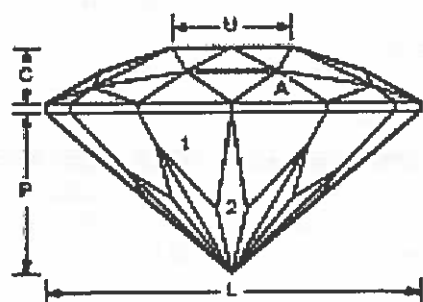
70 + 12 girdles = 82 facets

3-fold, mirror-image symmetry

96 index

L/W = 1.000 T/W = 0.342 U/W = 0.319

P/W = 0.435 C/W = 0.150

Vol./W<sup>3</sup> = 0.191**PAVILION**

|        |        |                                                                            |                |
|--------|--------|----------------------------------------------------------------------------|----------------|
| 1      | 43.00° | 04-12-20-28-36-44-<br>52-60-68-76-84-92                                    | CTP            |
| Girdle | 90.00° | 04-12-20-28-36-44-<br>52-60-68-76-84-92                                    | Calibrate Size |
| 2      | 41.00° | 96-06-10-13-19-22-<br>26-32-38-42-45-51-<br>54-58-64-70-74-77-<br>83-86-90 | Meet 1, Girdle |

**CROWN**

|   |        |                                         |                     |
|---|--------|-----------------------------------------|---------------------|
| A | 34.00° | 04-12-20-28-36-44-<br>52-60-68-76-84-92 | Even Girdle         |
| B | 28.50° | 11-21-43-53-75-85                       | Meet A, Girdle      |
| C | 27.60° | 96-32-64                                | Meet A, Girdle      |
| D | 23.90° | 12-20-44-52-76-84                       | Meet A, B, C        |
| E | 20.00° | 96-32-64                                | Meet A, B, C, D     |
| F | 17.00° | 06-26-38-58-70-90                       | Meet A, B, C, D, E  |
| T | 0.00°  | Table                                   | Meet E, F, and D, F |