

PROBLEMS OF DRAWING INTERPRETATION

Design 08.050 CUSHION ARROWHEAD as printed in the Lapidary Journal is very difficult to interpret. A "Cushion" design should have curved sides as seen in the plan view, but this one indicates a "Cut Corner Rectangle" like Figure 2A (at the right) which has been reproduced directly from the original reference.

If the sides are truly straight (as shown in the plan view) it would require a single girdle facet for each side and the side view (as shown in Figure 2B) would have a very ugly uneven girdle. Whether there is a large girdle or not the intersection between the "star" facets and the "table" would have a more pronounced curvature than shown in Figure 2A. The text which accompanies the diagram in the reference clearly recognizes this when it says ...*"On the crown, the star facets, 25 through 36, will infringe on the rectangular shape of the table."* No explanation is given for the lack of agreement between the diagram and the text.

The very last sentence in the reference article actually makes it clear that a "cushion" shape is intended when it says . . .*"Outline the girdle using 90 degrees at 95-1, 47-49, 93-3, 45-51 for the sides; 24-72, 22-26, 70-74 for the ends; 12-36-60-84 for the corners."* The problem of interpretation is that there is no indication that a number of height adjustments are needed when cutting these facets, but some are natural tiers that can and should be cut at the same height. For example: (95-1-47-49) is one set, (93-3-45-51) is another set, (24-72) is another set, (22-26-70-74) is another set, and (12-36-60-84) is another set. Each set would require its own height adjustment. Information such as natural grouping of facets is normally handled by showing all facets which go together (a tier) in a horizontal (row) listing. However, in the format used in the reference article, listing are shown in a vertical "order" listing. The only reason I can think of for a definite "order" is to take advantage of the grouping of facets (ones that do not need height adjustments). Vertical listing does this by listing these facets consecutively in the "Order" column and showing the same elevation angle in the "Degrees" column. But the horizontal listing accomplishes the same transfer of information without the implication that one has to follow the given "order" i.e. cut 1 before 2, 2 before 3, and 3 before 4 etc. To add to the confusion, the "Order" and "Index" information in the table do not agree with the *numbering in the diagram*. For example (see Figure 2A) the lower side of both crown and pavilion is listed as "48" index but facet "19" on that side is shown in the table as "INDEX 96". Facets "5" and "6" next to "19" are listed as INDEX "1" and "95" respectively. Which makes it look like the "48" is really "96". However facet order "13" is listed as "24" which

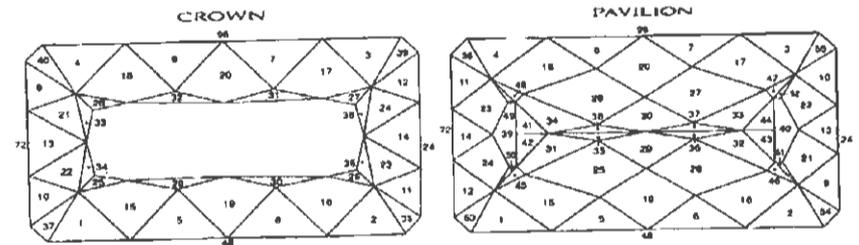


Figure 2A Plan View of Design 08.050 as shown in Lapidary Journal

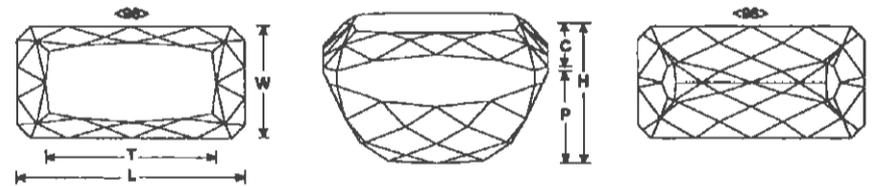


Figure 2A Design 08.050 modification with girdle facets to give the straight sides on a "Cut Corner Rectangle" (using diagram)

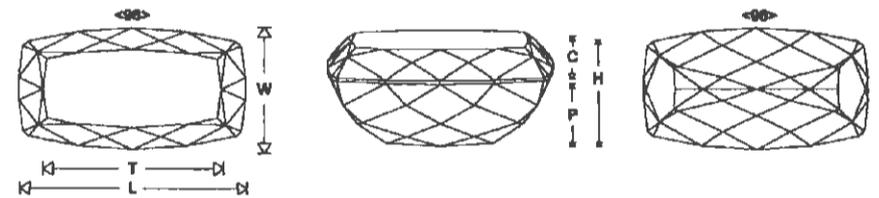


Figure 2B Design 08.050 interpreted with an "Antique Cushion" outline. (using text instead of diagram)

agrees with the "24" marking on the right end. So the indexing is "clockwise" on both the crown and pavilion (not possible since when the stone changes from pavilion to crown indexing is reversed). All of which could be very confusing to a neophyte who wants to use the instructions as a "cook book". An experienced cutter would recognize almost immediately that the diagram and the instructions are not synchronized, so there is little chance that these design instructions as they are presented in the reference can be used "cook book" style.