

Brilliant Rectangle

A new twist on an old cut — created for a Uruguayan amethyst.

BY CALVIN SMITH

PHOTO: JIM LAWSON

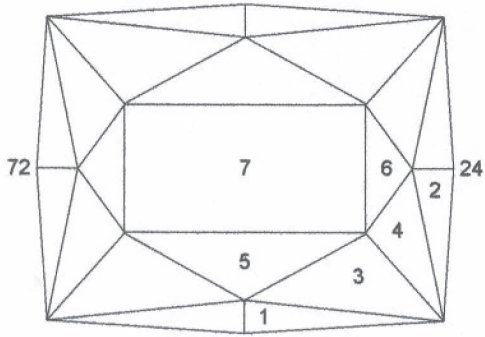


11X9.5mm, 6.48 ct. Uruguay Amethyst by Calvin Smith

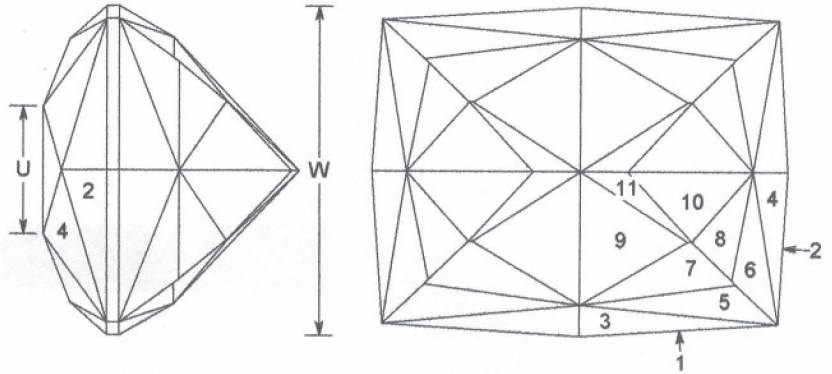
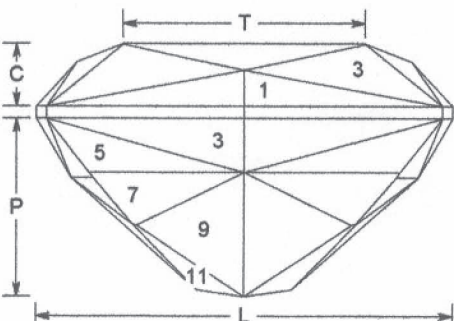
THE DEVELOPMENT of the “Brilliant Rectangle” design, its alternative design, and approaches to cutting it are featured in the December issue of *Lapidary Journal Jewelry Artist*, available at interweavestore.com.

CALVIN SMITH is an Oregon lapidary and gem cutter. He has been experimenting with revisiting faceting articles that ran in earlier issues of *Lapidary Journal Jewelry Artist* and updating them for today’s faceters.

60 48 36



84 <96> 12



PAVILION

FACET	ANGLE	INDEX
1	90.00°	01-47-49-95
2	90.00°	23-25-71-73
3	60.00°	01-47-49-95
4	60.00°	23-25-71-73
5	51.00°	02-46-50-94
6	48.00°	21-27-69-75
7	47.00°	02-46-50-94
8	45.00°	21-27-69-75
9	43.00°	01-47-49-65
10	42.00°	22-26-70-74
11	38.70°	03-45-51-93

CROWN

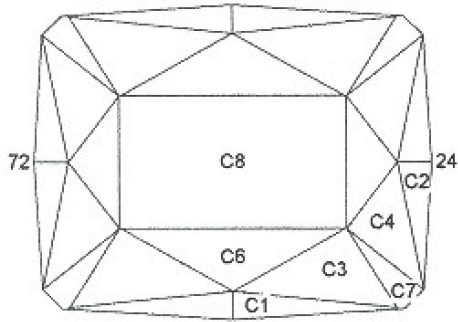
FACET	ANGLE	INDEX
1	47.86°	01-47-49-95
2	47.86°	23-25-71-73
3	32.03°	03-45-51-93
4	33.00°	20-28-68-76
5	21.49°	96-48
6	21.49°	24-72
7	0.00°	TABLE

**ORIGINAL DESIGN
 TECHNICAL NOTES**

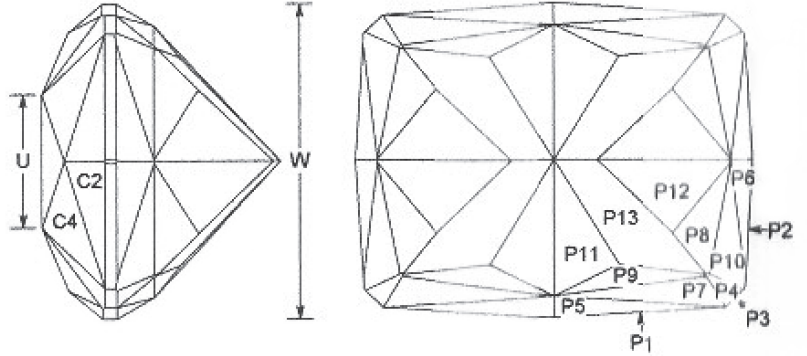
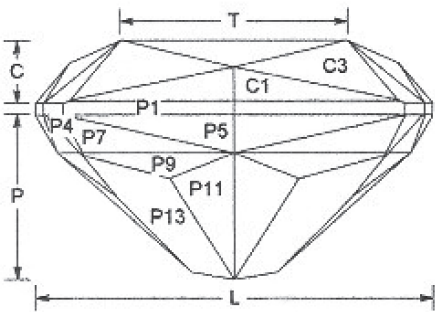
Angles for Refractive Index = 1.540
 57 + 8 girdles = 65 facets
 2-fold, mirror-image symmetry
 96 index
 Length/Width = 1.252
 Table/Width = 0.725
 U/Width = 0.389
 Pavilion/Width = 0.542
 Culet/Width = 0.191
 Volume/Width³ = 0.455



60 48 36



84 <96> 12



PAVILION

FACET	ANGLE	INDEX
1	90.00°	01-47-49-95
2	90.00°	23-25-71-73
3	90.00°	12-36-60-84
4	47.00°	12-36-60-84
5	60.00°	01-47-49-95
6	60.00°	23-25-71-73
7	49.00°	02-46-50-94
8	45.00°	21-27-69-75
9	48.00°	02-46-50-94
10	46.00°	21-27-69-75
11	43.00°	01-47-49-95
12	41.80°	22-26-70-74
13	41.30°	03-45-51-93

CROWN

FACET	ANGLE	INDEX
1	50.00°	01-47-49-95
2	50.00°	23-25-71-73
3	34.00°	03-45-51-93
4	35.00°	20-28-68-76
6	23.00°	96-48
7	32.87°	12-36-60-84
8	0.00°	TABLE
	23.75°	24-72

**ALTERNATIVE DESIGN
 TECHNICAL NOTES**

- Angles for Refractive Index = 1.540
- 65 + 12 girdles = 77 facets
- 2-fold, mirror-image symmetry
- 96 index
- Length/Width = 1.260
- Table/Width = 0.723
- U/Width = 0.424
- Pavilion/Width = 0.525
- Culet/Width = 0.199
- Volume/Width³ = 0.444

