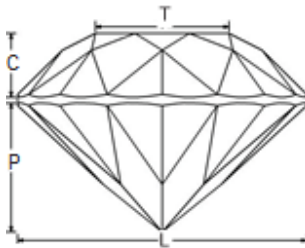
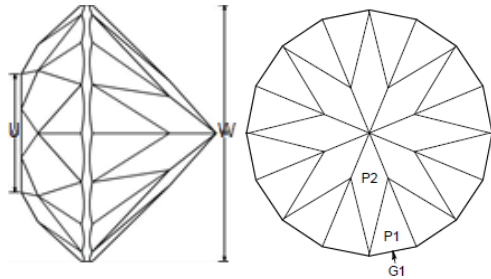
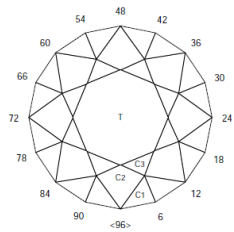


Standard Round Brilliant with Continuous Girdle

Section O 8A.1 Coloured Cubic Zirconia

Section I 8A.2 Coloured Cubic Zirconia

Section N 8A.3 Coloured Cubic Zirconia



Angles for R.I. = 2.160

57 + rolled girdle

8-fold, mirror-image symmetry

96 index

$L/W = 1.000$ $T/W = 0.593$ $U/W = 0.593$

$P/W = 0.461$ $C/W = 0.164$

$Vol. /W^3 = 0.225$

PAVILION

P1	45.00°	03-09-15-21-27-33-39-45 51-57-63-69-75-81-87-93	Cut to TCP
G1	90.00°		Cut to size, "rolled girdle"
P2	43.00°	96-12-24-36-48-60-72-84	Cut to Girdle

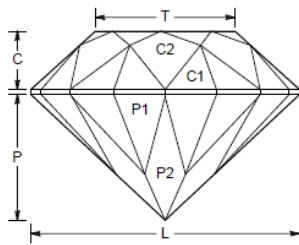
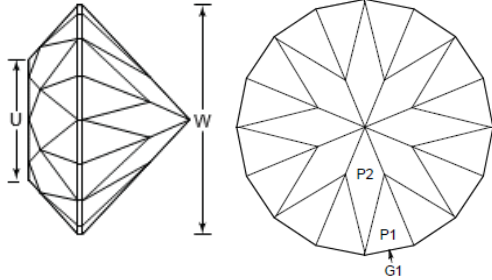
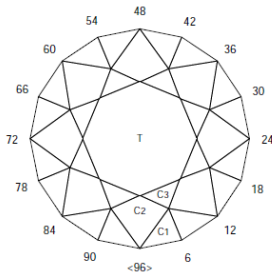
CROWN

C1	44.00°	03-09-15-21-27-33-39-45 51-57-63-69-75-81-87-93	Set girdle thickness
C2	37.00°	96-12-24-36-48-60-72-84	Cut to Girdle
C3	22.00°	06-18-30-42-54-66-78-90	Cut to meet C1, C2
T	0.00°	Table	Cut to meet C2, C3

Standard Round Brilliant with Faceted Girdle

Section O 8B.1 Australian Amethyst
 Section I 8B.2 Australian Amethyst
 Section N 8B.3 Australian Amethyst

Specified Size: 8 mm
 Specified Size: 7 mm



Angles for R.I. = 1.540
 57 + 16 girdles = 73 facets
 8-fold, radial symmetry
 96 index
 $L/W = 1.000$ $T/W = 0.519$ $U/W = 0.519$
 $P/W = 0.467$ $C/W = 0.216$
 $Vol. /W^3 = 0.240$

PAVILION

P1	45.00°	03-09-15-21-27-33-39-45 51-57-63-69-75-81-87-93	Cut to TCP
G1	90.00°	03-09-15-21-27-33-39-45 51-57-63-69-75-81-87-93	Set Size
P2	43.00°	96-12-24-36-48-60-72-84	Cut to Girdle

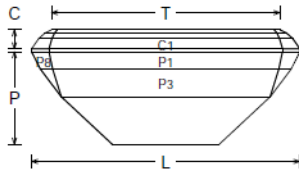
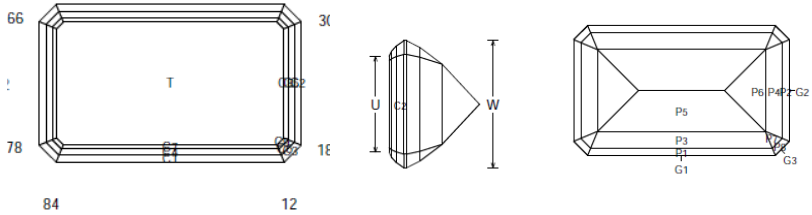
CROWN

C1	47.00°	03-09-15-21-27-33-39-45 51-57-63-69-75-81-87-93	Cut to establish girdle
C2	42.00°	96-12-24-36-48-60-72-84	Cut to Girdle
C3	27.00°	06-18-30-42-54-66-78-90	Meet C1, C2
T	0.00°	Table	Meet C2, C3

Standard oblong step cut with cut corners

Section O 9A.1 Australian Citrine
 Section I 9A.2 Australian Citrine
 Section N 9A.3 Coloured Quartz
 Section J 9A.4 Coloured Quartz

Specified Size: 12 mm x 14 mm
 Specified Size: 11 mm x 13 mm



Angles for R.I. = 1.540
 45 + 8 girdles = 53 facets
 2-fold, mirror-image symmetry
 96 index
 $L/W = 1.666$ $T/W = 1.400$ $U/W = 0.620$
 $P/W = 0.408$ $C/W = 0.136$
 $Vol. /W^3 = 0.561$

PAVILION

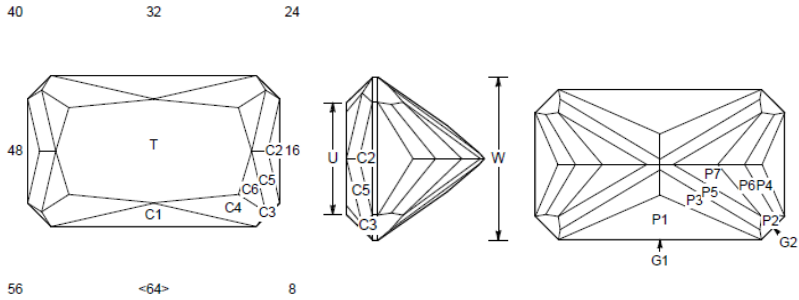
G1	90.00°	96-48	Set width
G2	90.00°	24-72	Set length
P1	63.00°	96-48	Cut to approx 75% of the height of the stone
P2	63.00°	24-72	Meet at P1, Girdle
P3	53.00°	96-48	Cut to diagram
P4	53.00°	24-72	Cut to meet P3
P5	43.00°	96-48	Cut to diagram, P3 should be 2x P1 wide
P6	43.00°	24-72	Cut to meet P5
P7	62.86°	12-36-60-84	Cut as required
P8	53.21°	12-36-60-84	Cut as required
G3	90.00°	12-36-60-84	Cut to level girdle

CROWN

C1	55.00°	96-48	Set girdle width
C2	55.00°	24-72	Level girdle
C3	55.00°	12-36-60-84	Level girdle
C4	42.00°	96-48	Cut to diagram
C5	42.00°	24-72	Meet C5, C6, C8
C6	42.00°	12-36-60-84	Cut as required
C7	26.00°	96-48	Cut to leave C4 half the width of C1
C8	26.00°	24-72	Cut to leave C5 half the width of C2
C9	26.00°	12-36-60-84	Cut as required
T	0.00°	Table	Cut to diagram

The Meridian Cut

Attributed to the late Jack Bushby
Section O 10.1 Colourless Topaz



Angles for R.I. = 1.610

49 + 8 girdles = 57 facets

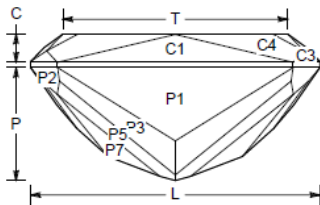
2-fold, mirror image symmetry

64 index

$L/W = 1.666$ $T/W = 1.296$ $U/W = 0.685$

$P/W = 0.651$ $C/W = 0.162$

$Vol. /W^3 = 0.663$



PAVILION

G1	90.00°	64-32
G2	90.00°	08-16-24-40-48-56
P1	55.00°	64-32
P2	55.00°	08-16-24-40-48-56
P3	49.50°	01-31-33-63
P4	49.50°	15-17-47-49
P5	43.25°	03-29-35-61
P6	43.25°	13-19-45-51
P7	39.00°	05-27-37-59

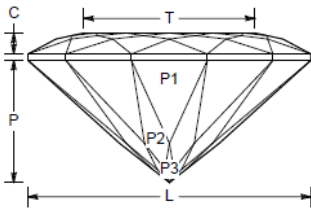
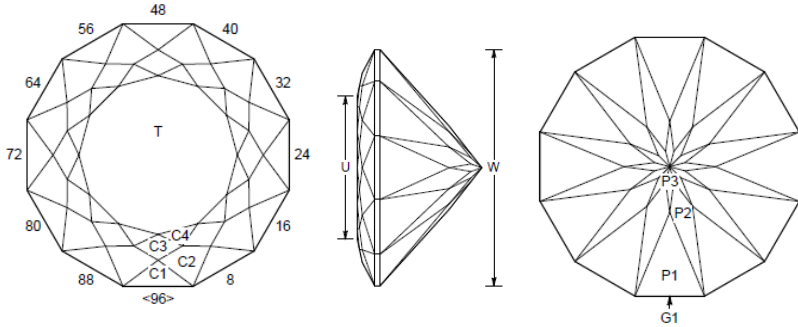
CROWN

C1	46.00°	64-32
C2	46.00°	16-48
C3	68.42°	08-24-40-56
C4	36.00°	01-31-33-63
C5	36.00°	15-17-47-49
C6	25.00°	13-19-45-51
T	00.00°	Table

Centralian Star

Bob Kay

Section I 10.2 Colourless Topaz



Angles for R.I. = 1.610

85 + 12 girdles = 97 facets

12-fold, radial symmetry

96 index

$L/W = 1.000$ $T/W = 0.605$ $U/W = 0.605$

$P/W = 0.429$ $C/W = 0.074$

$Vol. /W^3 = 0.179$

PAVILION

P1	42.00°	96-08-16-24-32-40 48-56-64-72-80-88	Cut to TCP
G1	90.00°	96-08-16-24-32-40 48-56-64-72-80-88	Establish size
P2	40.00°	04-12-20-28-36-44 52-60-68-76-84-92	Cut to Girdle
P3	38.00°	96-08-16-24-32-40 48-56-64-72-80-88	Cut to P1

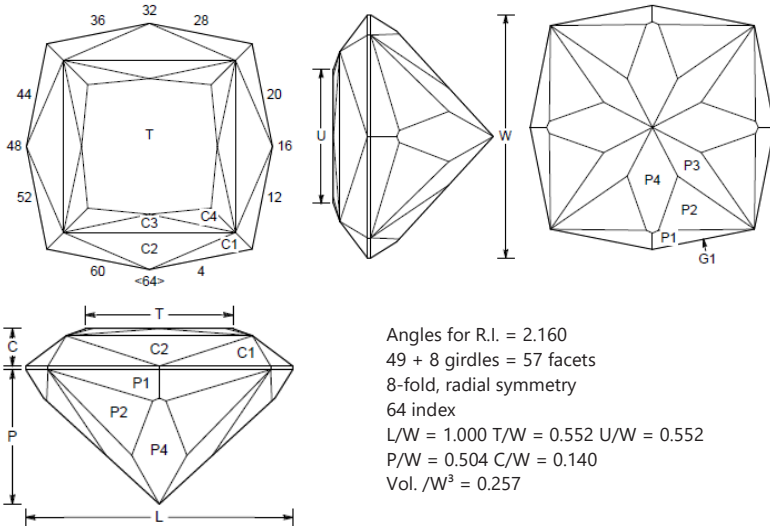
CROWN

C1	28.00°	96-08-16-24-32-40 48-56-64-72-80-88	Establish Girdle
C2	22.00°	04-12-20-28-36-44 52-60-68-76-84-92	Meet Girdle
C3	12.00°	96-08-16-24-32-40 48-56-64-72-80-88	Meet C1
C4	08.00°	04-12-20-28-36-44 52-60-68-76-84-92	Meet C2
T	0.00°	Table	Meet C3, C4

JBCROSS

The late Jack Bushby

Section N 10.3 Colourless Man-made Cubic Zirconia



Angles for R.I. = 2.160
 49 + 8 girdles = 57 facets
 8-fold, radial symmetry
 64 index
 $L/W = 1.000$ $T/W = 0.552$ $U/W = 0.552$
 $P/W = 0.504$ $C/W = 0.140$
 $Vol. /W^3 = 0.257$

PAVILION

G1	90.00°	02-14-18-30-34-46-50-62	Size Stone
P1	58.50°	02-14-18-30-34-46-50-62	Establish girdle to about 75% of stone depth
P2	47.00°	03-13-19-29-35-45-51-61	Meet at Girdle
P3	40.50°	08-24-40-56	Meet at Girdle
P4	42.50°	64-16-32-48	Meet at PCP. Cut to diagram

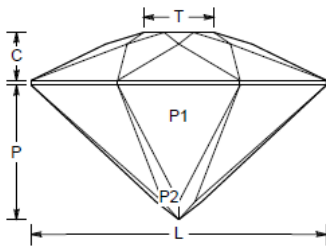
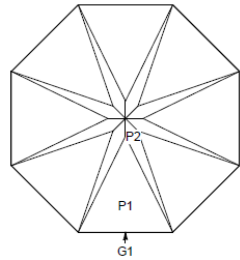
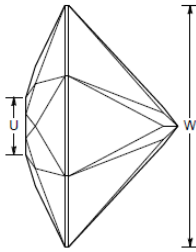
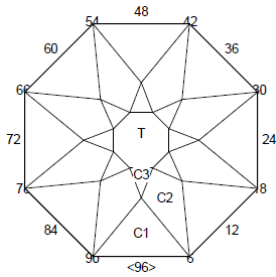
CROWN

C1	55.00°	02-14-18-30-34-46-50-62	Establish Girdle
C2	37.00°	64-16-32-48	Meet at Girdle
C3	20.00°	64-16-32-48	Cut to meet C1, C2
C4	14.00°	01-15-17-31-33-47-49-63	Cut to meet C1, C2, C3
T	00.00°	Table	Cut to meet C3, C4

Topaz Twinkler-96

Bob Kay

Section J 10.4 Colourless Topaz



Angles for R.I. = 1.610

41 + 8 girdles = 49 facets

8-fold, radial symmetry

96 index

$L/W = 1.000$ $T/W = 0.239$ $U/W = 0.239$

$P/W = 0.454$ $C/W = 0.162$

$Vol. /W^3 = 0.204$

PAVILION

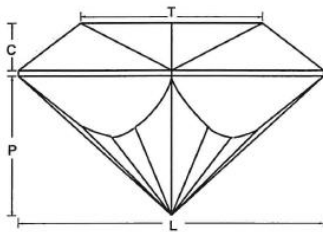
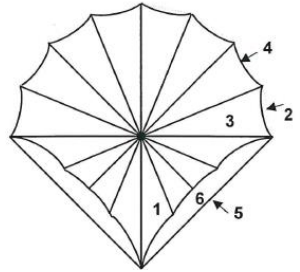
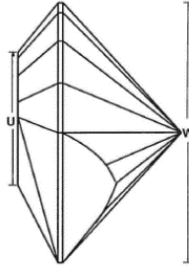
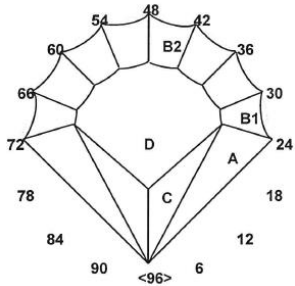
P1	43.00°	96-12-24-36-48-60-72-84	Cut to TCP
G1	90.00°	96-12-24-36-48-60-72-84	Set size
P2	40.00°	06-18-30-42-54-66-78-90	Cut to meet girdle and form PCP

CROWN

C1	26.00°	96-12-24-36-48-60-72-84	Cut to level girdle
C2	21.50°	06-18-30-42-54-66-78-90	Meet at Girdle
C3	17.00°	96-12-24-36-48-60-72-84	Meet at C1
T	00.00°	Table	Meet C2, C3

Montezuma Concavia – Concave Cut

Modified by Paul Sabolta 2018 for Concave
 From an original design by Arya Akhavan 2013
 Section O 10.5 Blue Man-made Cubic Zirconia



Angles for R.I. = 2.160
 31 + 10 girdles = 41 facets
 1-fold, mirror-image symmetry
 96 index
 $L/W = 1.000$ $T/W = 0.599$ $U/W = 0.513$
 $P/W = 0.457$ $C/W = 0.155$
 $Vol. /W^3 = 0.180$

PAVILION

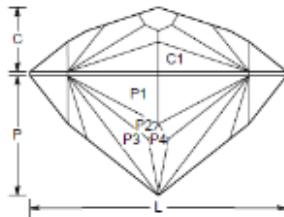
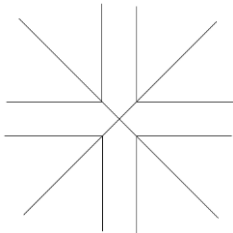
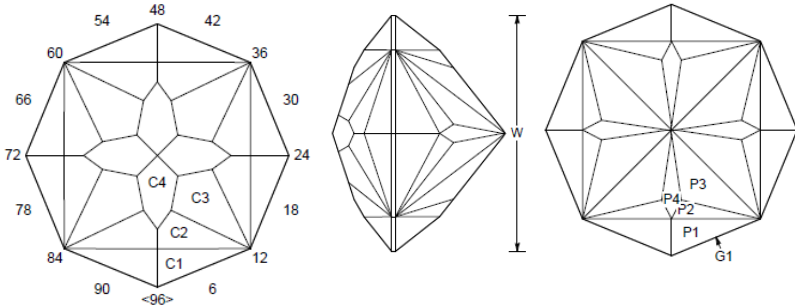
1	43.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Preform, Cut to TCP (Flat Facets)
2	90.00°	27-33-39-45-51-57-63-69	Preform, Set stone size (8 Flat Facets) Minimum 10mm
3	43.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Concave (16 Concave Facets) Form PCP (Mandrel size, cutters choice to achieve meetpoints)
4	90.00°	27-33-39-45-51-57-63-69	Concave (8 Concave Facets) Form PCP (Mandrel size, cutters choice to achieve meetpoints)
5	90.00°	12-84	Meet 3,4
6	70.00°	12-84	Level girdle

CROWN

A	40.00°	12-84	Set girdle thickness to suit
B1	40.00°	27-33-39-45-51-57-63-69	Level girdle (8 Flat Facets)
B2	40.00°	27-33-39-45-51-57-63-69	Concave (8 Concave Facets) (Mandrel size, cutters choice to achieve meetpoints)
C	34.67°	11-85	Meet A, 3
D	00.00°	Table	Meet A, C, B2

English Rose

Maurice Jones, Salisbury East, SA
Section O 11.1 Colourless Quartz



Angles for R.I. = 1.540
52 + 8 girdles = 60 facets
4-fold, radial symmetry
96 index
L/W = 1.000
P/W = 0.465 C/W = 0.251
Vol. $\sqrt{W^3} = 0.214$

Note: Facets on 43.00° do not meet at culet, as shown above.

PAVILION

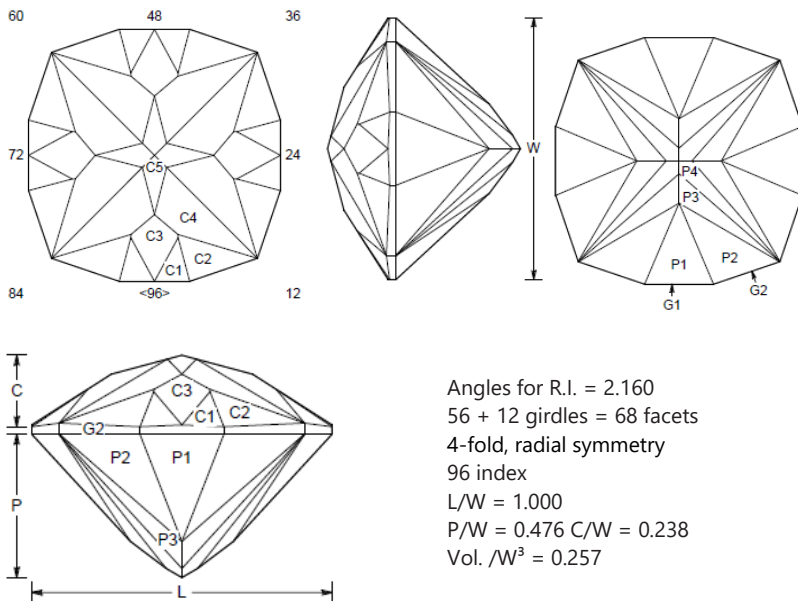
P1	54.00°	06-18-30-42-54-66-78-90	Cut to TCP
G1	90.00°	06-18-30-42-54-66-78-90	Set size, level girdle
P2	50.00°	07-17-31-41-55-65-79-89	Meet P1, Girdle
P3	43.00°	11-13-35-37-59-61-83-85	Meet P1, P2, G
P4	38.40°	96-24-48-72	Meet P1

CROWN

C1	40.80°	06-18-30-42-54-66-78-90	Cut to establish girdle
C2	33.40°	08-16-32-40-56-64-80-88	Cut to meet Girdle
C3	30.00°	12-36-60-84	Cut to meet C1, C2 at Girdle
C4	18.20°	96-24-48-72	Cut to 50% of width of stone

Vesper

Maurice Jones, Salisbury East, SA
Section I 11.2 Colourless Man-made Cubic Zirconia



Angles for R.I. = 2.160
56 + 12 girdles = 68 facets
4-fold, radial symmetry
96 index
 $L/W = 1.000$
 $P/W = 0.476$ $C/W = 0.238$
 $\text{Vol. } /W^3 = 0.257$

PAVILION

G1	90.00°	96-24-48-72	Set size
G2	90.00°	05-19-29-43-53-67-77-91	Cut as per diagram
P1	47.30°	96-24-48-72	Cut to TCP
P2	45.00°	05-19-29-43-53-67-77-91	Meet P1, Girdle
P3	41.00°	08-16-32-40-56-64-80-88	Meet Girdle
P4	39.50°	12-36-60-84	Meet G, P3. Form PCP

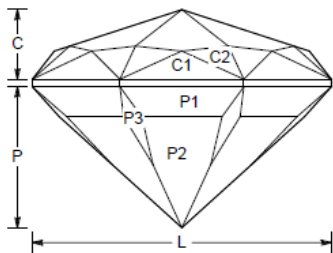
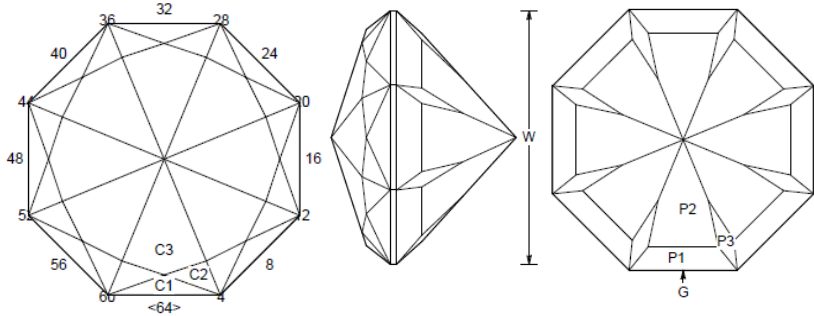
CROWN

C1	33.50°	01-23-25-47-49-71-73-95	Establish Girdle
C2	33.00°	04-20-28-44-52-68-76-92	Establish Girdle
C3	32.50°	96-24-48-72	Meet Girdle
C4	22.82°	10-14-34-38-58-62-82-86	Meet Girdle
C5	15.00°	96-24-48-72	Meet C3

Petunia

The Late Jack Bushby

Section N 11.3 Coloured Man-made Cubic Zirconia



Angles for R.I. = 2.160

56 + 8 girdles = 64 facets

8-fold, radial symmetry

64 index

$L/W = 1.166$ $T/W = 0.519$ $U/W = 0.620$

$P/W = 0.583$ $C/W = 0.194$

$Vol. /W^3 = 1.147$

PAVILION

P1	48.00°	64-08-16-24-32-40-48-56	Cut to TCP
G	90.00°	64-08-16-24-32-40-48-56	Set size
P2	42.17°	64-08-16-24-32-40-48-56	Cut to leave P1 approx 1/3 original
P3	42.00°	04-12-20-28-36-44-52-60	Cut to meet P1, Girdle

CROWN

C1	52.00°	64-08-16-24-32-40-48-56	Cut to establish girdle
C2	39.90°	02-06-10-14-18-22-26-30-34-38-42-46-50-54-58-62	Cut to meet Girdle
C3	18.00°	64-08-16-24-32-40-48-56	Cut to meet C1, C2