Theorem 1 [Bor].
Suppose P is a Coxeter polytope with Coxeter diagram Σ, and p is the face corresponding to an elliptic subdiagram σ of Σ that has no A_n and D_5 component. Then p is itself a Coxeter polytope.

A node of Σ *attaches* to σ if it is joined to some node of σ by an edge of any type.

Let p be a face of P. Let a and b be facets of p such that $a = A \cap p$, $b = B \cap p$, where A and B are facets of P. Denote by $\angle ab$ the dihedral angle of p formed by a and b.

Theorem 2 [All]. *Under the hypotheses of Theorem 1:*

(1) *If neither A nor B attaches to σ, then $\angle ab = \angle AB$.*

(2) *If just one of A and B attaches to σ, say to the component σ_0, then*
  - (a) *if $A \perp B$ then $a \perp b$;*
  - (b) *if A and B are joined by a single edge and adjoining A and B to σ_0 yields a diagram B_k (resp D_k, E_8 or H_4), then $\angle ab = \pi/4$ (resp $\pi/4$, $\pi/6$ or $\pi/10$);*
  - (c) *otherwise, a and b do not meet.*

(3) *If A and B attach to different components of σ, then*
  - (a) *if $A \perp B$ then $a \perp b$;*
  - (b) *otherwise, a and b do not meet.*

(4) *If A and B attach to the same component of σ, say σ_0, then*
  - (a) *if A and B are not joined, and $\sigma_0 \cup \{A, B\}$ is a diagram E_6 (resp. E_8 or F_4), then $\angle ab = \pi/3$ (resp. $\pi/4$ or $\pi/4$);*
  - (b) *otherwise, a and b do not meet.*

[All] D. Allcock, *Infinitely many hyperbolic Coxeter groups through dimension 19*, Geom. Topol. 10 (2006), 737–758.

[Bor] R. Borcherds, *Coxeter groups, Lorentzian lattices, and K3 surfaces*, Int. Math. Res.Notices (1998), 1011–1031.