

By the adjunction formula, E is an elliptic curve.

Refer to P550. See P147. Let $Q = V_3 \cap G$.
 $Q' = V_3 \cap F. \Rightarrow K_Q = (K_P + [Q])|_Q = (-4H + 2H)|_Q$
 $= [-2H]|_Q \Rightarrow K_E = (K_Q + [Q'])|_{Q \cap Q'} = (-2H + 2H)|_E$
 $= [0]|_E \Rightarrow K$

$$K_E = (K_Q + [Q'])|_E = (-2H + 2H)|_E = 0.$$

$$\Rightarrow c_1(K_E) = 0 = 2 - 2g \Rightarrow g = 1 \Rightarrow E \text{ is elliptic.}$$

Since E contains no lines, every line $L \subset X$ meeting E meets E in only one point, and so we may define a map

$$\tau: D = \{L \subset X: L \cap V_3 \neq \emptyset\} \rightarrow E = V_3 \cap X$$

expressing D as a fourfold branched cover of E .

$E \supset \text{a line} \Rightarrow E = \text{line} \Rightarrow g(E) = 1 \neq g(P') = 0.$
 $\Rightarrow E$ can not contain a line. $\#(L \cap E) \geq 2. \Rightarrow$
 $\#(L \cap V_3) \geq 2 \Rightarrow L \subset V_3 \Rightarrow L \subset V_3 \cap X = E \Rightarrow$
 Contradiction. $\Rightarrow L \subset X$ meets E in only one point if it does. If $L \in D$, then $L \cap (V_3 \cap X) = L \cap E \neq \emptyset$. Given any point $x \in E$, then the set of all lines in X passing through x is $T_x(X) \cap X$.