$3-d$ along L.
But since g & $dz_1 \wedge dz_2/f$ must have a pole of order 0 (i.e no pole) along $L-S$, g must be a meromorphic function with a pole of order $\leq d-3$ along $L-S$.

Thus we can say that g is a polynomial of degree $\leq d-3$ in z_1, z_2.

For $F = Z_0^r$, where $r \leq d-3$. $\Rightarrow$

$$g(Z_0, Z_1, Z_2) = \frac{G(Z_0, Z_1, Z_2)}{Z_0^r} = G\left(1, \frac{Z_1}{Z_0}, \frac{Z_2}{Z_0}\right)$$

$\Rightarrow$ Since G has deg r, $g(z_1, z_2)$ has deg r.

Question: $\mathrm{ord}_L f = -d$ $\quad \mathrm{ord}_L g = r \leq d-3$

$\mathrm{ord}_L(dz_1 \wedge dz_2) = -3$

$\Rightarrow$ $+d+r-3 \leq 0$ $\Rightarrow$ ω has a pole of order ≤ 0 along L. But ω has a simple pole along S, and elsewhere holomorphic. $\Rightarrow$ What happens on $S \cap L$?

In other words, ω has a simple pole at a point $p \in S \cap L$, but ω has no pole at p at the same time. Maybe I misunderstand the definition of "along" L.

It is possible that ω is holomorphic at some specific point of L. 95. 2. 20. ω has a pole of order ≤ 1 along L.

Thus the holomorphic 1-forms in S are exactly the differentials