$\tilde{U} = \pi^{-1}(U)$, and

$$z(i)_j = \frac{z_j}{z_i} = \frac{l_j}{l_i}, \quad j \neq i,$$

$$z_i = z_i$$

holomorphic coordinates on $\tilde{U}_i$ as on P184.

$\ulcorner$ $\tilde{U}_i = (l_i \neq 0) \subset \tilde{U} = \{(z, l) \mid z \in l\} \subset U \times \mathbb{P}^{n-1}$
$l = [l_1, \cdots l_n]$,

$$\begin{array}{ccc} \tilde{U}_i & \longrightarrow & \mathbb{C}^n \\ \Downarrow & & \\ (z, l) & \longmapsto & (z(i)_1, \; z(i)_2, \cdots \; z(i)_i, \cdots z(i)_n) \end{array}$$

$$\left(\frac{l_1}{l_i} = \frac{z_1}{z_i}, \; \frac{l_2}{l_i} = \frac{z_2}{z_i}, \cdots, z_i, \cdots \frac{l_n}{l_i} = \frac{z_n}{z_i} \right) \lrcorner$$

Recall that the divisor E is given in $\tilde{U}_i$ as $(z_i = 0)$, and that the coordinates $\{z(i)_j\}_{j \neq i}$ restrict to Euclidean coordinates on $E \cong \mathbb{P}^{n-1}$. Now let f be any holomorphic function near $p \in M$, $V = (f)$ its divisor. Write

$$f(z) = \sum_{m \geq 0} f_m(z),$$

where

$$f_m(z) = \sum_{|a| = m} C_a \cdot z_1^{a_1} \cdots z_n^{a_n}$$

is the mth homogeneous component of f in terms of the coordinates z around p. Setting $\tilde{f} = \pi^* f$, $\tilde{f}_m = \pi^* f_m$, we have