Consider $g^{-1}[1, \infty)$. $\Rightarrow$ $g^{-1}[1,\infty)$ contains an open dense subset of $f(M)$, and since $g^{-1}[1,\infty)$ is closed, $g^{-1}[1,\infty) \supset f(M)$. $\Rightarrow$ $g(q) \geq 1$. ⌟

4. We next argue that we may assume $N = n+1$, so that $f(M)$ is to be analytic hypersurface. Precisely, we shall show that for a generic choice of coordinate system, the composition g in

$$\begin{tikzcd} M \arrow[r, "f"] \arrow[dr, dashed, "g"'] & \Delta^N \arrow[d, "\pi = \text{projection}"] \\ & \Delta^{n+1} \end{tikzcd}$$

are proper, at least if we allow ourselves to shrink the polycylinder Δ^N. If this has been established, and if we have proved the result in case $N = n+1$, then a finite number of analytic functions of the form $h \cdot \pi$, where $h \in \mathcal{O}(\Delta^{n+1})$ has divisor $g(M)$, will define $f(M)$.

⌜ For example, let $N = 2+1$, $n = 1$.

$$\begin{tikzcd} M \arrow[r, "f"] \arrow[dr, "g_{12}"'] & \Delta^3 \arrow[d, "\pi_{12}"] \\ & \Delta^2 \end{tikzcd}$$

$g_{12}(x) = (\, f_1(x),\ f_2(x))$.

$\Rightarrow g_{12}(M) = (\, h_{12} \quad = 0)$

since $g_{12}(M)$ is a hypersurface