$= \{ \overleftrightarrow{f} \circ g_1 = \cdots = \overleftrightarrow{f} \circ g_e = 0 \}$. But from $f(W) = f(S \cap W)$, $W \subset f^{-1}(f(S))$. $\Rightarrow$ Since M is irreducible, again by Whitney, P 77, Theorem 1. K,

$$M \subset f^{-1}(f(S)) \quad \Rightarrow \quad f(M) \subset f(S) \Rightarrow f(M) = f(S).$$

This reduces us to proving the theorem when f has maximum rank $n = \dim M$ at some point $p_0 \in M^*$.

⊓ If f has maximum rank $< n$, we proved that $f(M) = f(S)$ is analytic by induction. $\Rightarrow$ We have only to prove that f has maximum rank $n = \dim M$.

We will then prove that $f(M)$ is an n-dimensional analytic subvariety of the polycylinder.

3. At this juncture, we may define the current $S \in \mathcal{D}^{p,p}(\Delta)$ ($p = N - n$), which will turn out to be the $T_{f(M)}$ once the theorem is proven. The definition is

$$S(\varphi) = \int_{M^*} f^*(\varphi), \quad \varphi \in A_c^{n,n}(\Delta).$$

Since f is proper and holomorphic, S is a closed, positive current.

⊓ $(dS)(\psi) = \pm S(d\psi) = \int_{M^*} f^*(d\psi) = \int_{M^*} d(f^*\psi) = 0$ by P33 Stokes' Theorem for Analytic Varieties. $\Rightarrow$ S is closed.