solid solution takes over as second phase. The niobium/titanium ratio in both phases rises as reduction proceeds, and the last vestiges of the $\mathit{Me}_{12}O_{29}$ phase, in equilibrium with the final product, $Ti_{0.17}Nb_{0.67}O_2$, are almost denuded of titanium.

Reduction of the Titanium Niobium Oxides. II. $\mathit{TiNb}_{24}\mathit{O}_{62}$. S. K. E. FORGHANY AND J. S. ANDERSON,* Address as above. Interpretation of the reduction path of $TiNb_{24}O_{62}$ is complicated by uncertainty about both the stoichiometric ranges of the possible block structures and the formation of Ti–Nb solid solutions. Reduction forms the $\mathit{Me}_{12}O_{29}$ phase, probably from the outset, with an initial composition close to $Ti_2Nb_{10}O_{29}$, thereby rapidly depleting the $\mathit{Me}_{25}O_{62}$ phase of titanium. When log P_{O_2} (atm) has dropped to -9.62, a phase approximately $Ti_{0.95}Nb_{11.05}O_{29}$ is in equilibrium with titanium-free $Nb_{25}O_{62}$ at its lower composition limit ($NbO_{2.471}$). $Nb_{25}O_{62}$ is then reduced to $Nb_{47}O_{116}$ without change in the $Me_{12}O_{29}$. At $-9.62 > \log P_{O_2}$ (atm) > -10.0, niobium is transferred to the $\mathit{Me}_{12}O_{29}$ phase and $Nb_{47}O_{116}$ is consumed. A second univariant equilibrium is set up as $Nb_{47}O_{116}$ is reduced to $Nb_{22}O_{54}$. This is consumed in turn, to increase the niobium content of the $\mathit{Me}_{12}O_{29}$ until, at log P_{O_2} close to -10.8, monophasic $Ti_{0.48}Nb_{11.52}O_{29}$ is formed. The (Ti, Nb)O_2 solid solution then appears and the final product is $Ti_{0.04}Nb_{0.96}O_2$, with the rutile superstructure cell reported for NbO_2.