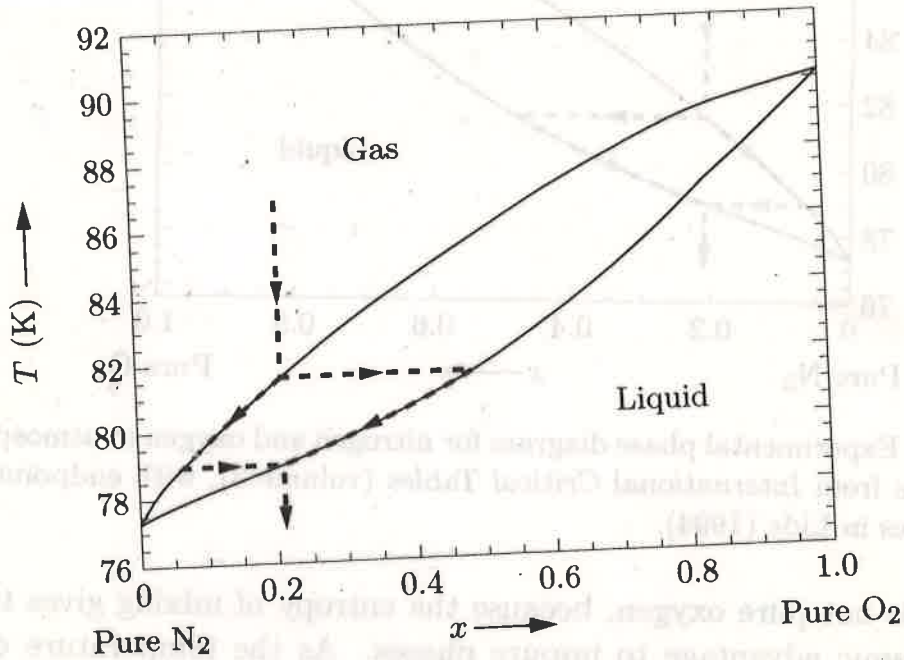


## Problem 5.59 (like HW 5.60)

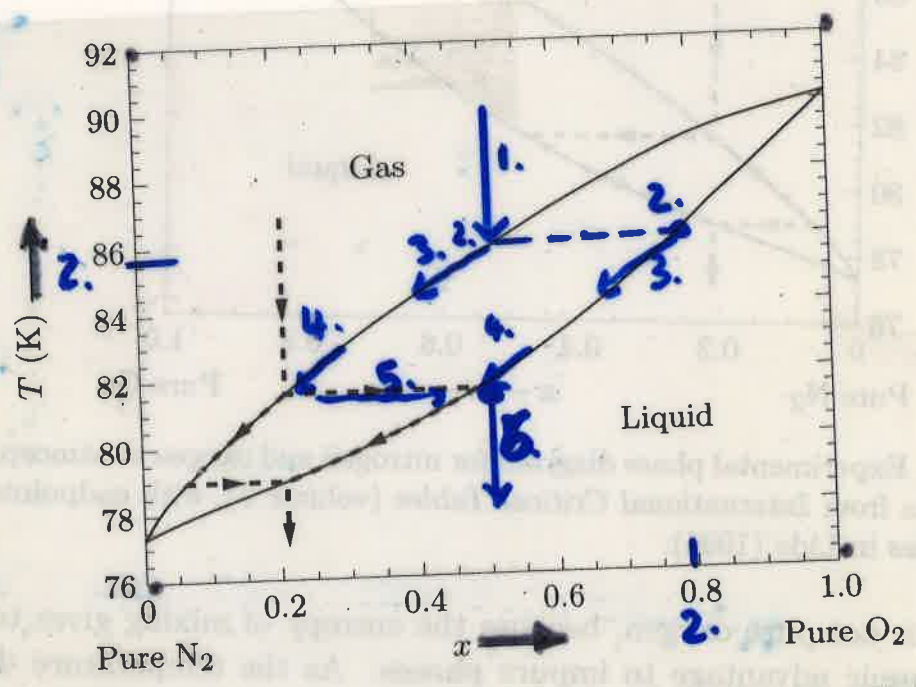
Suppose you cool a mixture of 50% nitrogen and 50% oxygen until it liquefies. Describe the cooling sequence in detail, including  $T$  &  $x$  at which liquefaction begins & ends.



**Figure 5.31.** Experimental phase diagram for nitrogen and oxygen at atmospheric pressure. Data from *International Critical Tables* (volume 3), with endpoints adjusted to values in Lide (1994).

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