APPENDIX E

FIGURES

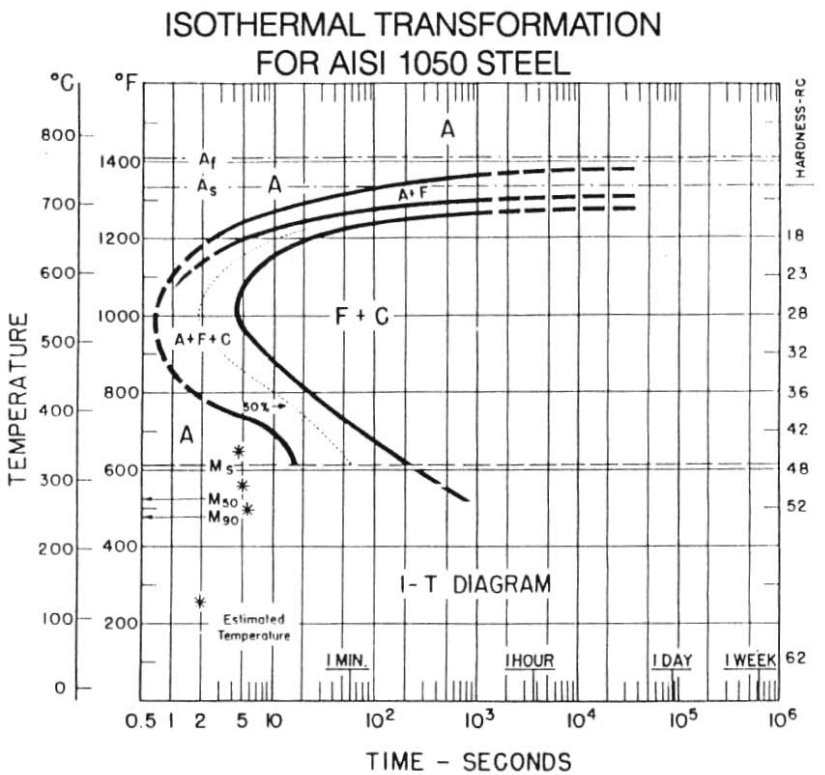

Figure E.1 Isothermal Transformation (I-T) diagram for AISI 1050 Steel. (From the Atlas of Isothermal Transformation and Cooling Transformation Diagrams, 1977, p. 15. Reprinted by permission of ASM International, Metals Park, Ohio.)

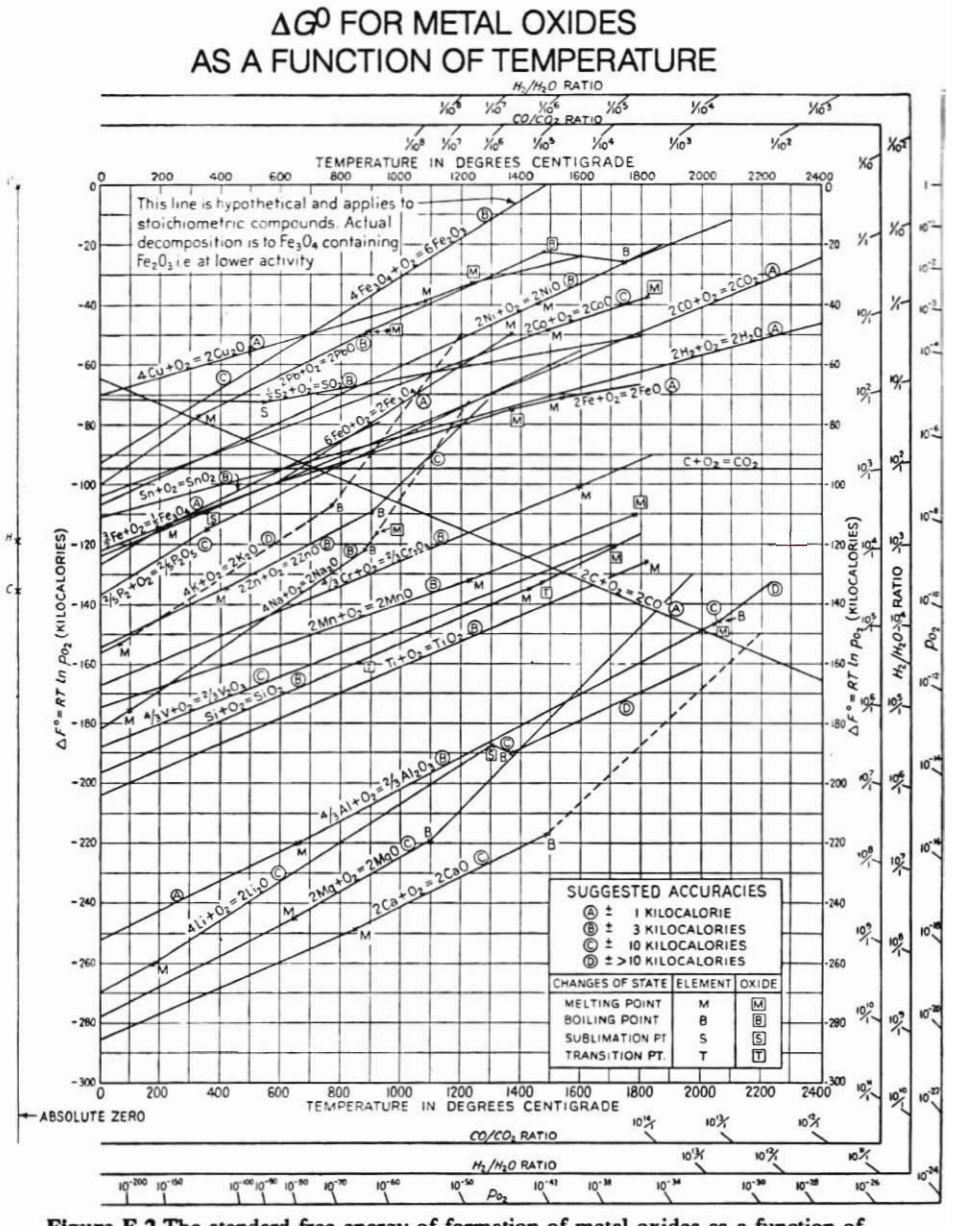

Figure E.2 The standard free energy of formation of metal oxides as a function of temperature. (From L.S. Darken and R.W. Gurry, 1953, Physical Chemistry of Metals, Fig. 14-4. Reprinted by permission of McGraw-Hill, Inc., New York.)

ΔG^0 (ΔF_T^0) FOR METAL SULFIDES AS A FUNCTION OF TEMPERATURE

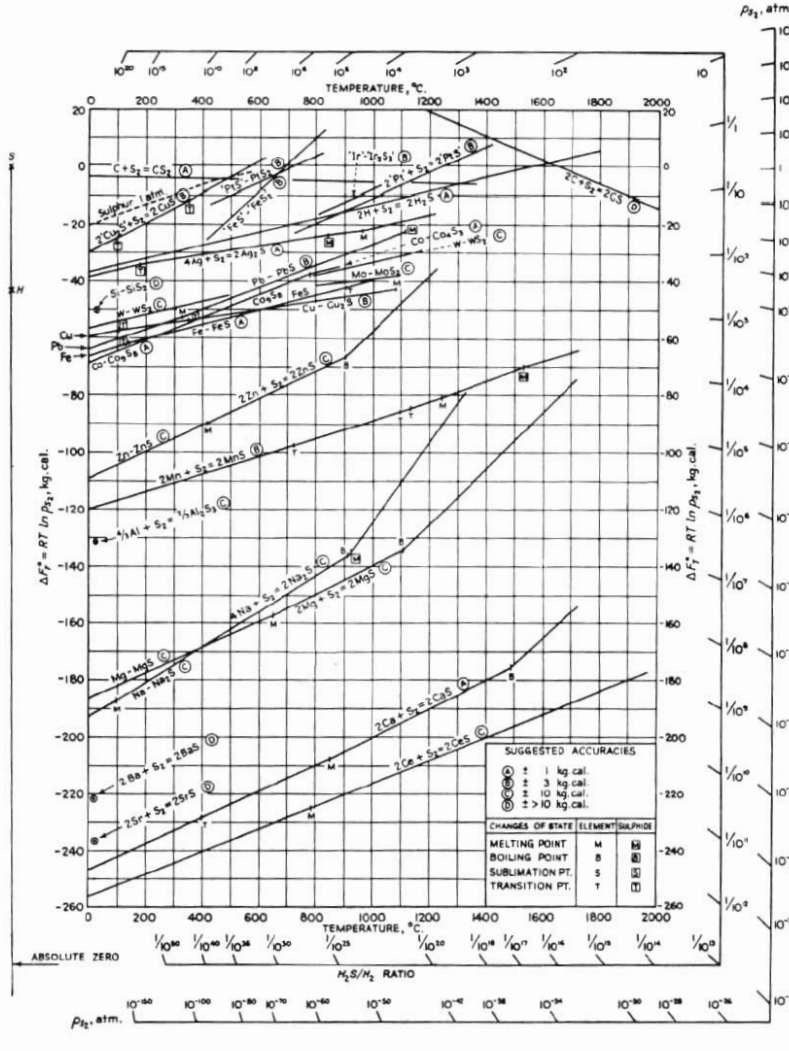

Figure E.3 The standard free energy of formation of metal sulfides as a function of temperature. (From L.S. Darken and R.W. Gurry, 1953, Physical Chemistry of Metals, Fig. 14-9. Reprinted by permission of McGraw-Hill, Inc., New York.)

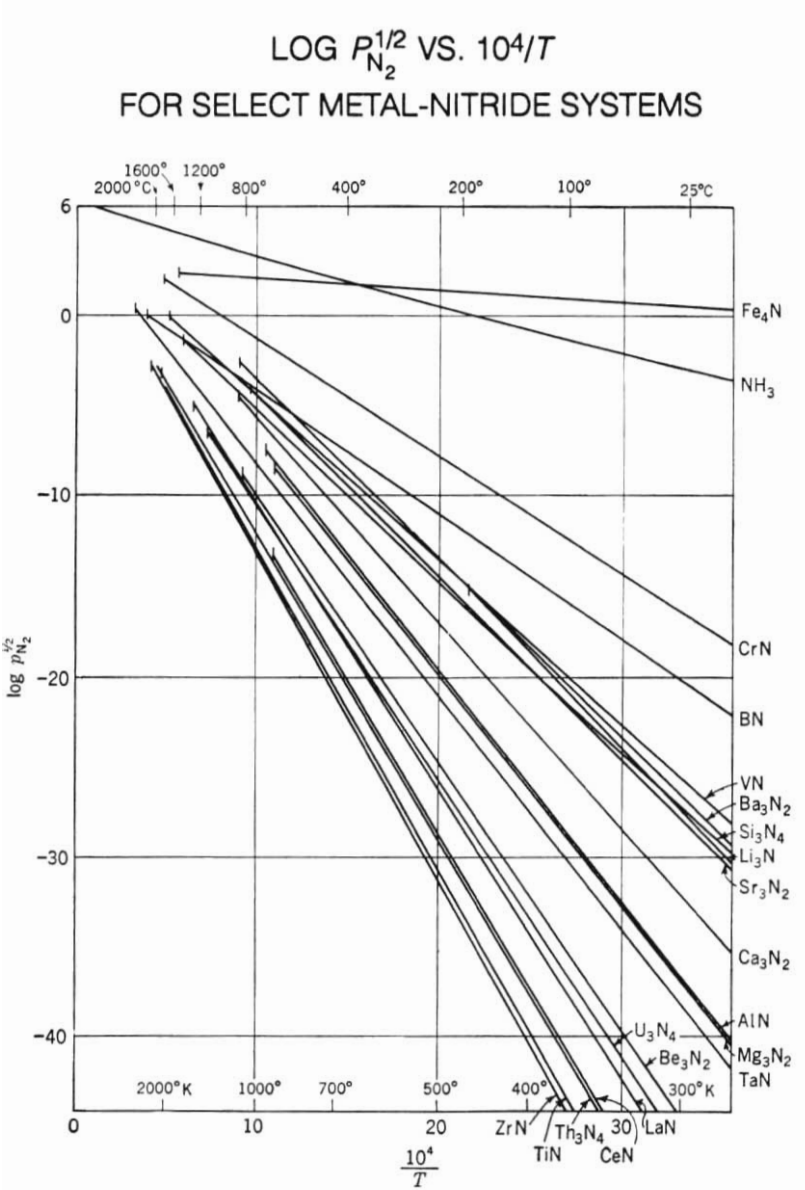

Figure E.4 Log $P_{N_2}^{1/2}$ vs. $10^4/T$ for select metal-nitride systems. (From L.S. Darken and R.W. Gurry, 1953, Physical Chemistry of Metals, Fig. 14-11. Reprinted by permission of McGraw-Hill, Inc., New York.)

E^0 AND $-\Delta F^0$ ($-\Delta G^0$) FOR SELECT CHLORIDES AS A FUNCTION OF TEMPERATURE

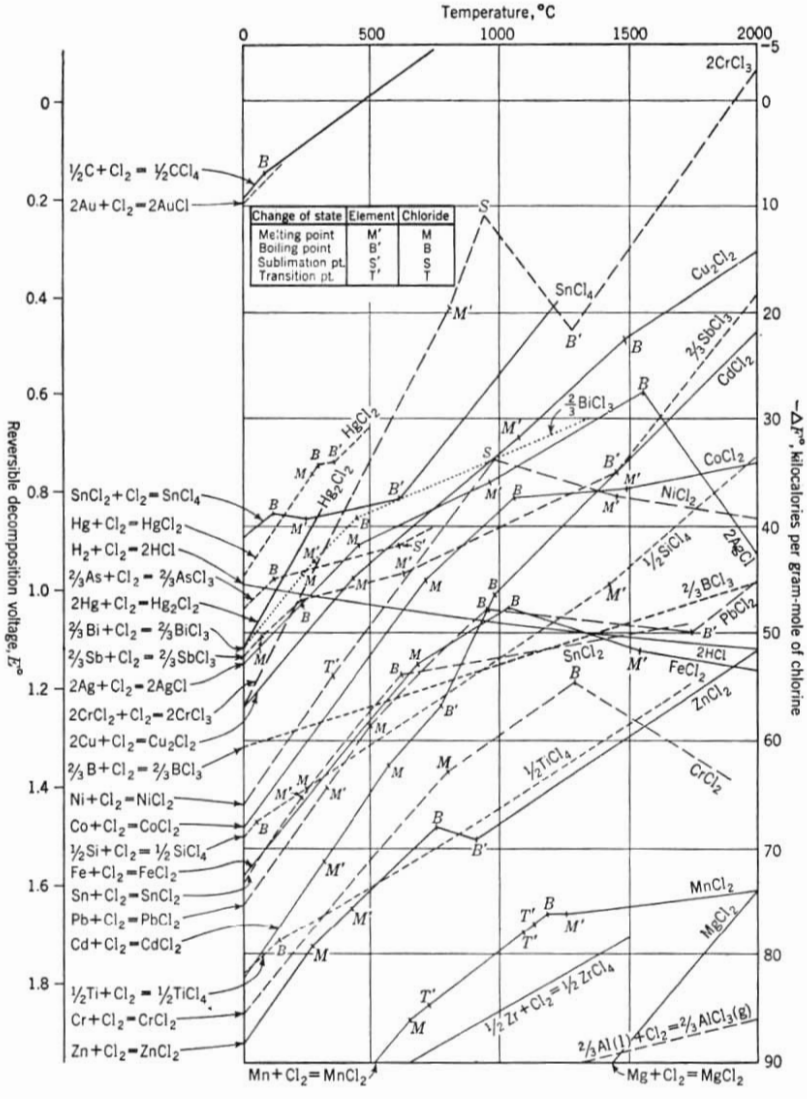

Figure E.5 The standard free energy of formation and reversible decomposition voltage of select chlorides as a function of temperature. (From L.S. Darken and R.W. Gurry, 1953, Physical Chemistry of Metals, Fig. 14-12. Reprinted by permission of McGraw-Hill, Inc., New York.)

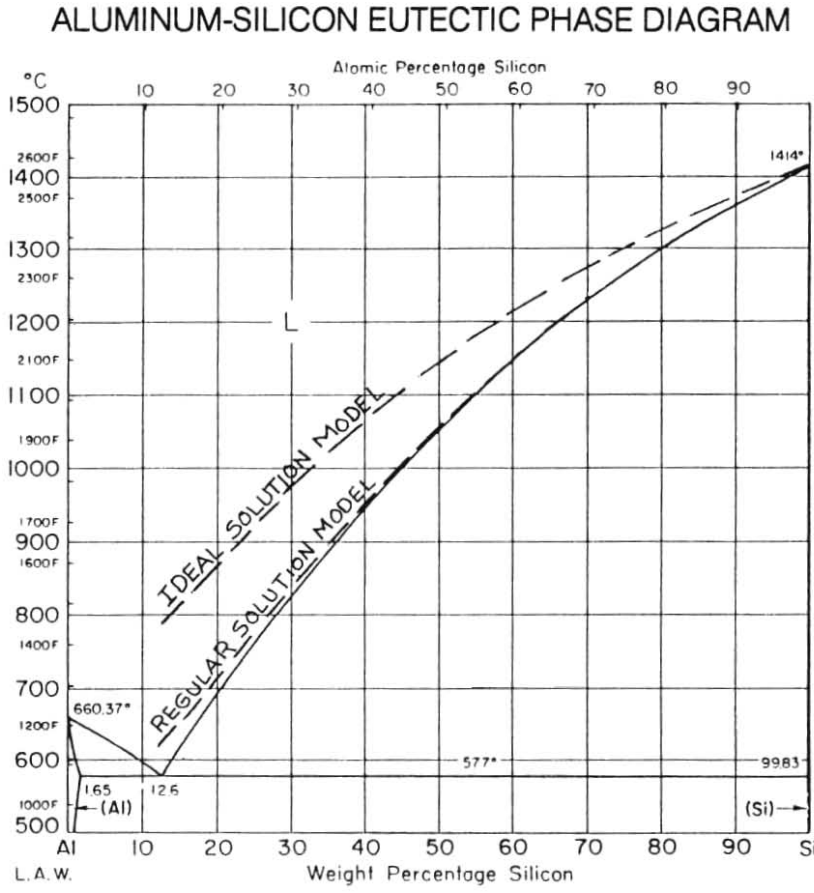

Figure E.6 Al-Si Eutectic Phase Diagram: No solid solubility. (From the Metals Handbook, 8th edition, v. 8, Metallography, Structures, and Phase Diagrams, 1973, p. 263. Reprinted by permission of ASM International, Metals Park, Ohio.)

SILVER-COPPER EUTECTIC PHASE DIAGRAM

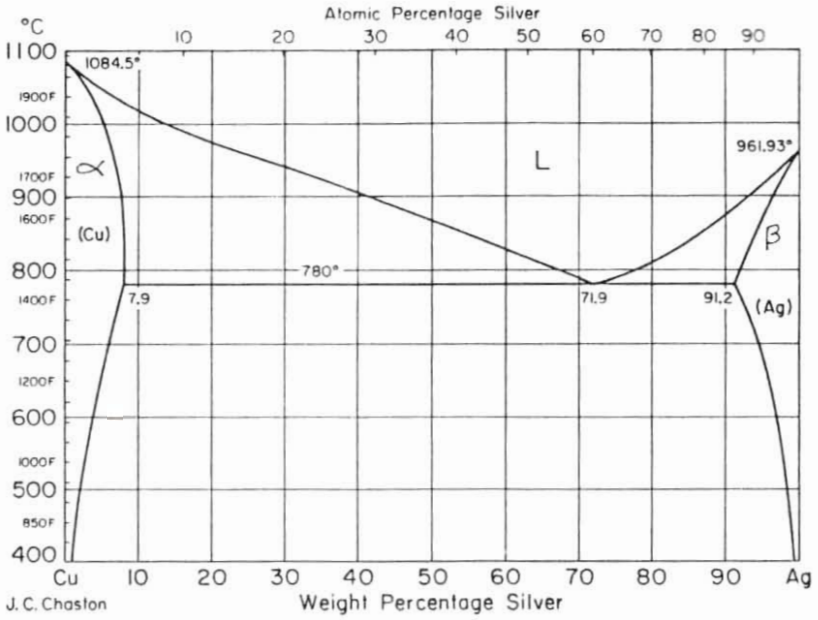

Figure E.7 Ag-Cu Eutectic Phase Diagram: Terminal Solid Solubility. (From the Metals Handbook, 8th edition, v. 8, Metallography, Structures, and Phase Diagrams, 1973, p. 253. Reprinted by permission of ASM International, Metals Park, Ohio.)

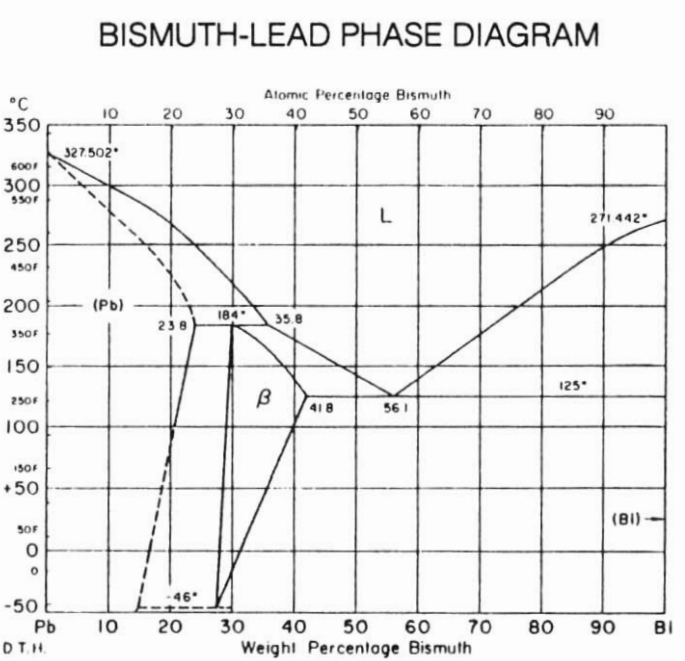

Figure E.8 Bi-Pb Phase Diagram. (From the Metals Handbook, 8th edition, v. 8, Metallography, Structures, and Phase Diagrams, 1973, p. 273. Reprinted by permission of ASM International, Metals Park, Ohio.)

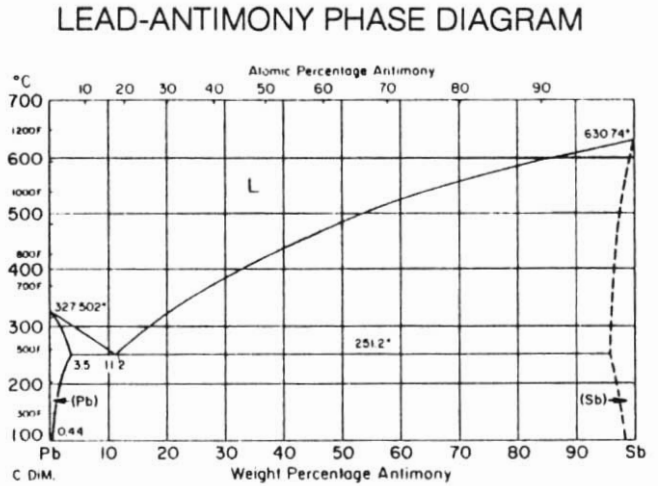

Figure E.9 Pb-Sb Phase Diagram. (From the Metals Handbook, 8th edition, v. 8, Metallography, Structures, and Phase Diagrams, 1973, p. 329. Reprinted by permission of ASM International, Metals Park, Ohio.)

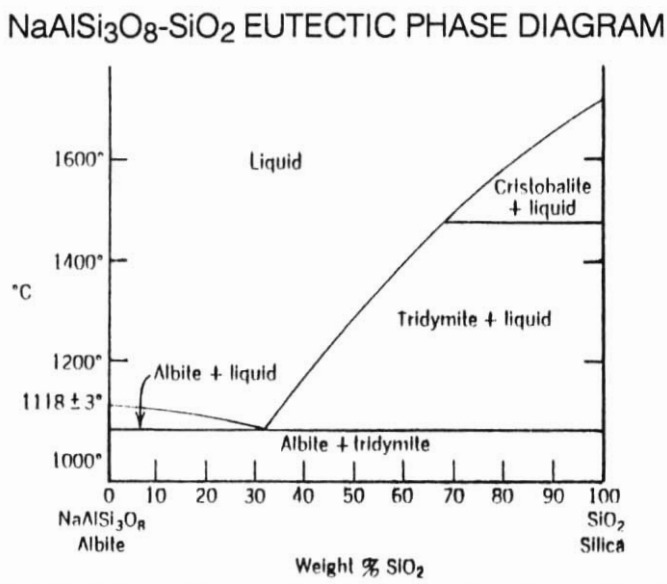

Figure E.10 $NaAlSi_3O_8$-SiO_2 eutectic phase diagram: No solid solubility. (From C. Klein and C.S. Hurlbut, Jr., 1985, Manual of Mineralogy, Fig. 12.5. Reprinted by permission of John Wiley and Sons, Inc., Copyright © 1985.)

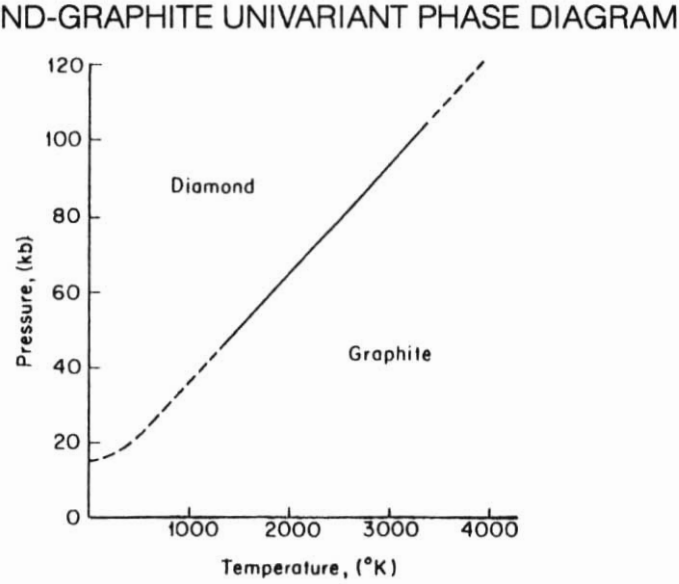

Figure E.11 Diamond-graphite univariant P-T phase diagram. (From E.G. Ehlers, 1972, The Interpretation of Geological Phase Diagrams, Fig. 93. Reprinted by permission of W.H. Freeman and Company.)