

# Contents

Introduction .....	1
Previous Studies .....	2
Eh Versus pE .....	2
Eh-pH Diagrams: Background .....	3
Types of Boundaries in Eh-pH Space .....	4
Thermodynamic Data and Uncertainties .....	7
Use of Eh-pH Diagrams at Other Temperatures and Pressures .....	8
Stability Limits for Water .....	8
Natural Waters .....	9
Presentation of the Elements and Elements Covered .....	12
Iodine and Other Halides .....	14
Sulfur .....	16
Selenium .....	18
Tellurium .....	20
Polonium .....	22
Nitrogen .....	24
Phosphorus .....	26
Arsenic .....	28
Antimony .....	30
Bismuth .....	32
Carbon .....	34
Silicon .....	36
Germanium .....	38
Tin .....	40
Lead .....	42
Boron .....	44
Aluminum .....	46
Gallium .....	48
Indium .....	50
Thallium .....	52
Zinc .....	54
Cadmium .....	56
Mercury .....	58
Copper .....	60
Silver .....	64
Gold .....	66
Nickel .....	68
Cobalt .....	71
Iron .....	73
Palladium .....	82
Rhodium .....	84
Ruthenium .....	86
Platinum .....	88
Iridium .....	90
Osmium .....	92
Manganese .....	94
Technetium .....	97
Rhenium .....	100
Chromium .....	102
Molybdenum .....	104
Tungsten .....	106
Vanadium .....	108
Niobium .....	110
Tantalum .....	112
Titanium .....	114
Zirconium .....	116
Hafnium .....	118
Scandium .....	120
Yttrium and the Rare Earth Elements (REE) .....	122
Americium .....	141
Plutonium .....	144
Neptunium .....	146
Uranium .....	151
Thorium .....	158
Beryllium .....	160

Magnesium	162	Barium	168
Calcium	164	Radium	170
Strontium	166		
References			172
Subject Index			175