

CHIMIE - PHYSIQUE

STRUCTURE

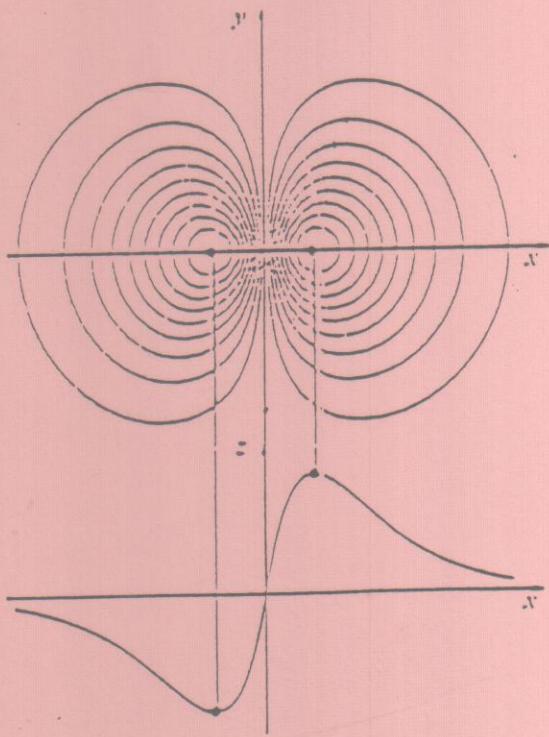
DE LA MATIÈRE

FICHES DU COURS

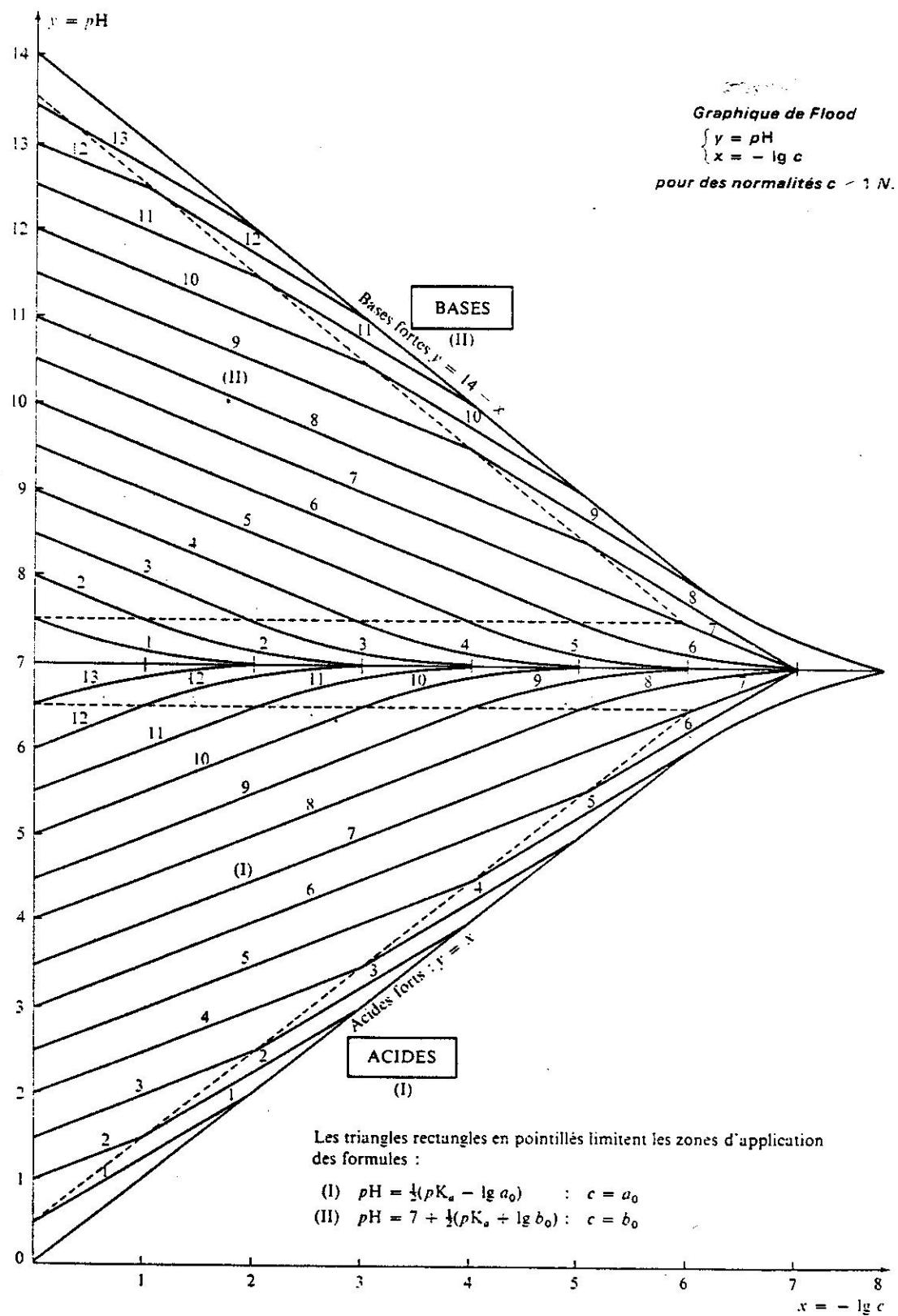
1 ère ANNÉE

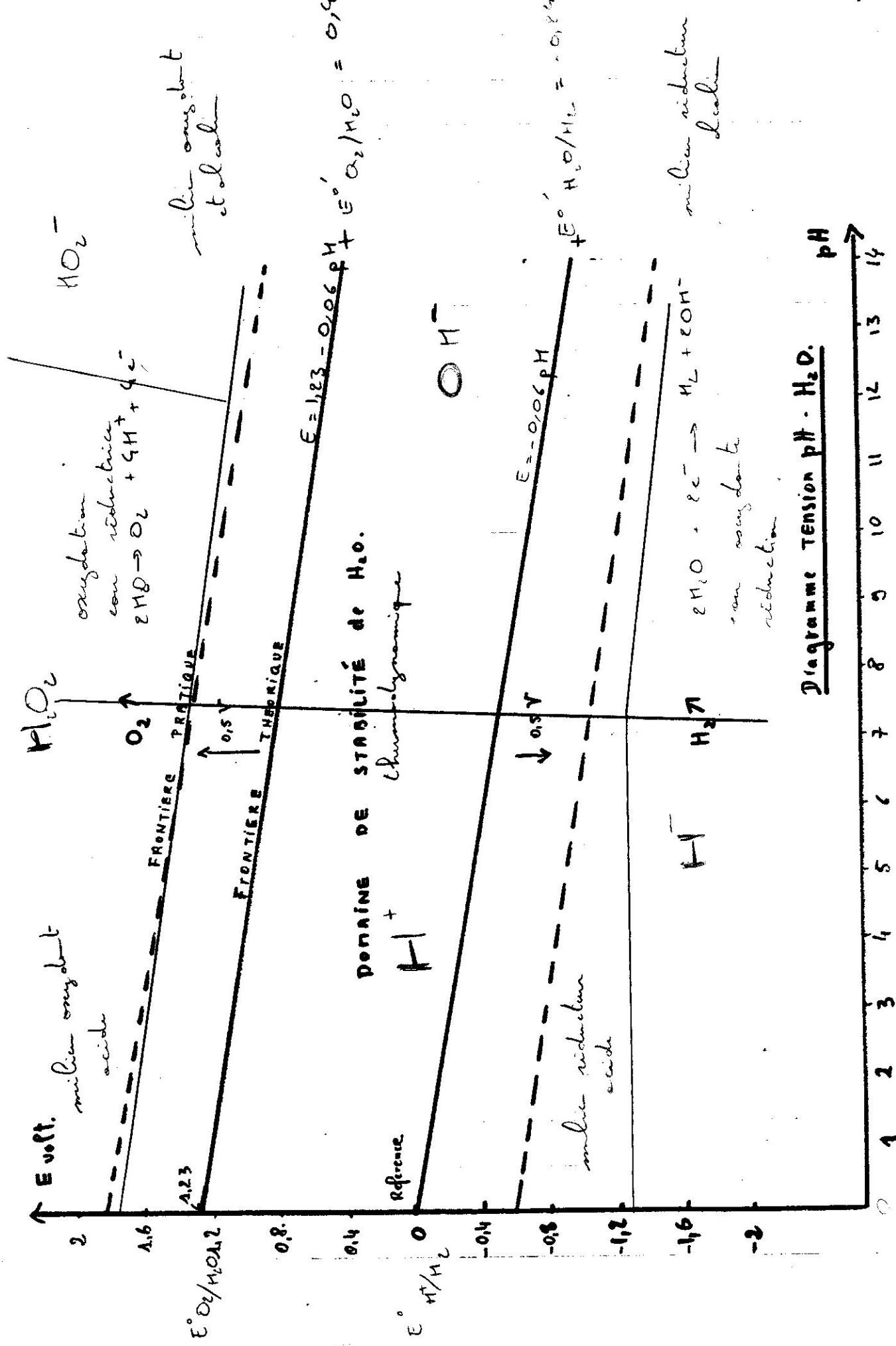
1991-1992

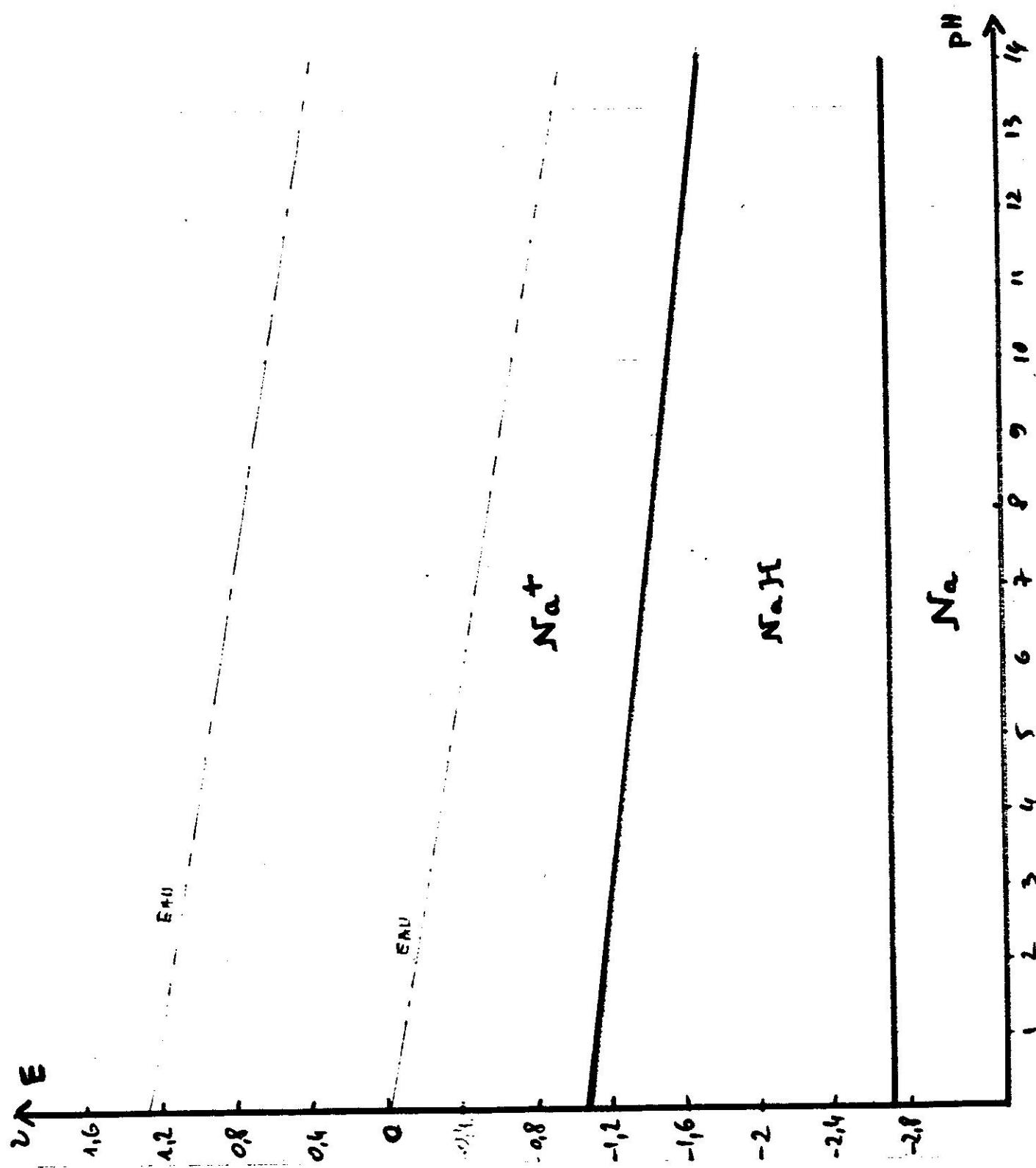
Pr. H. PINATEL

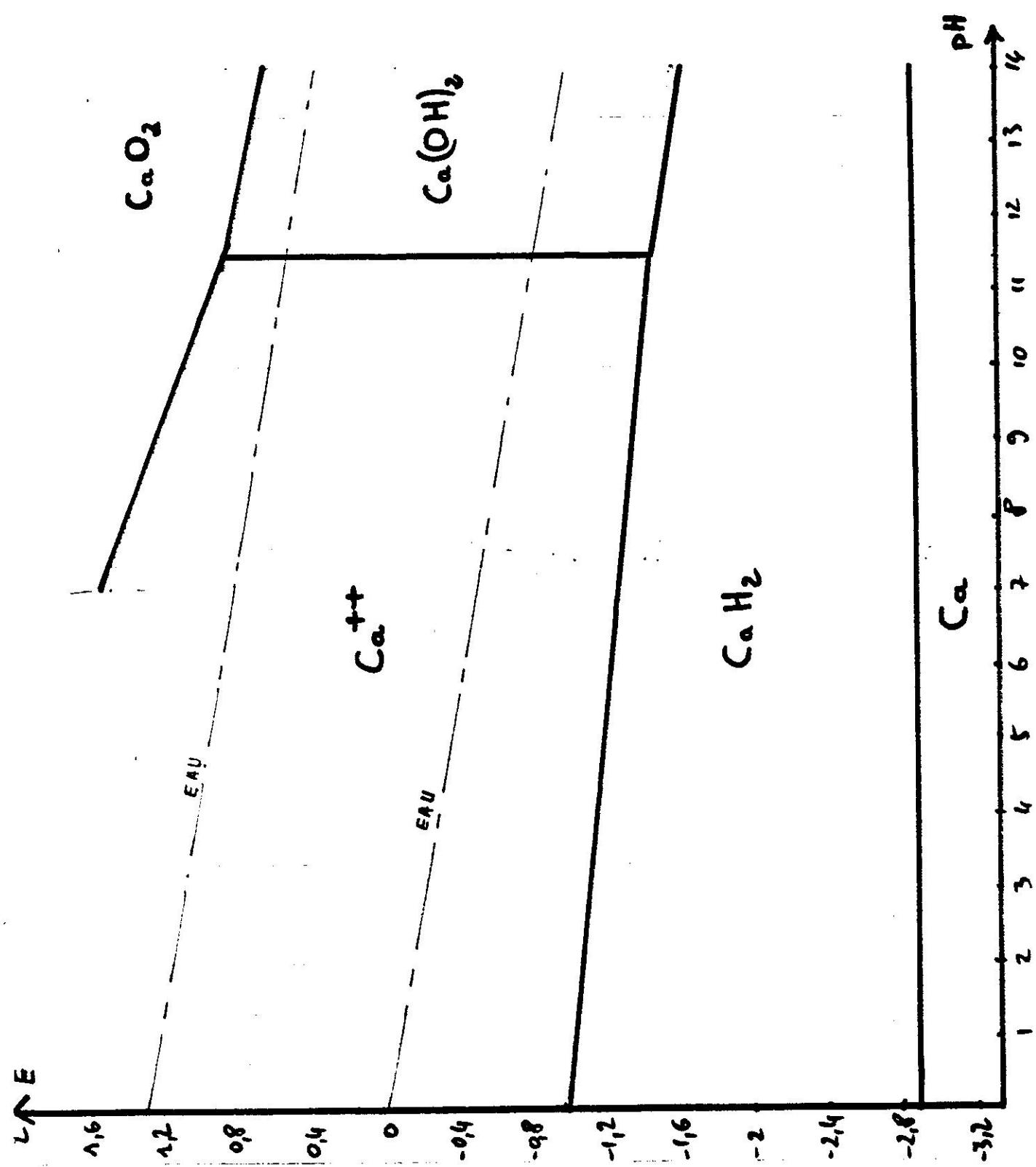


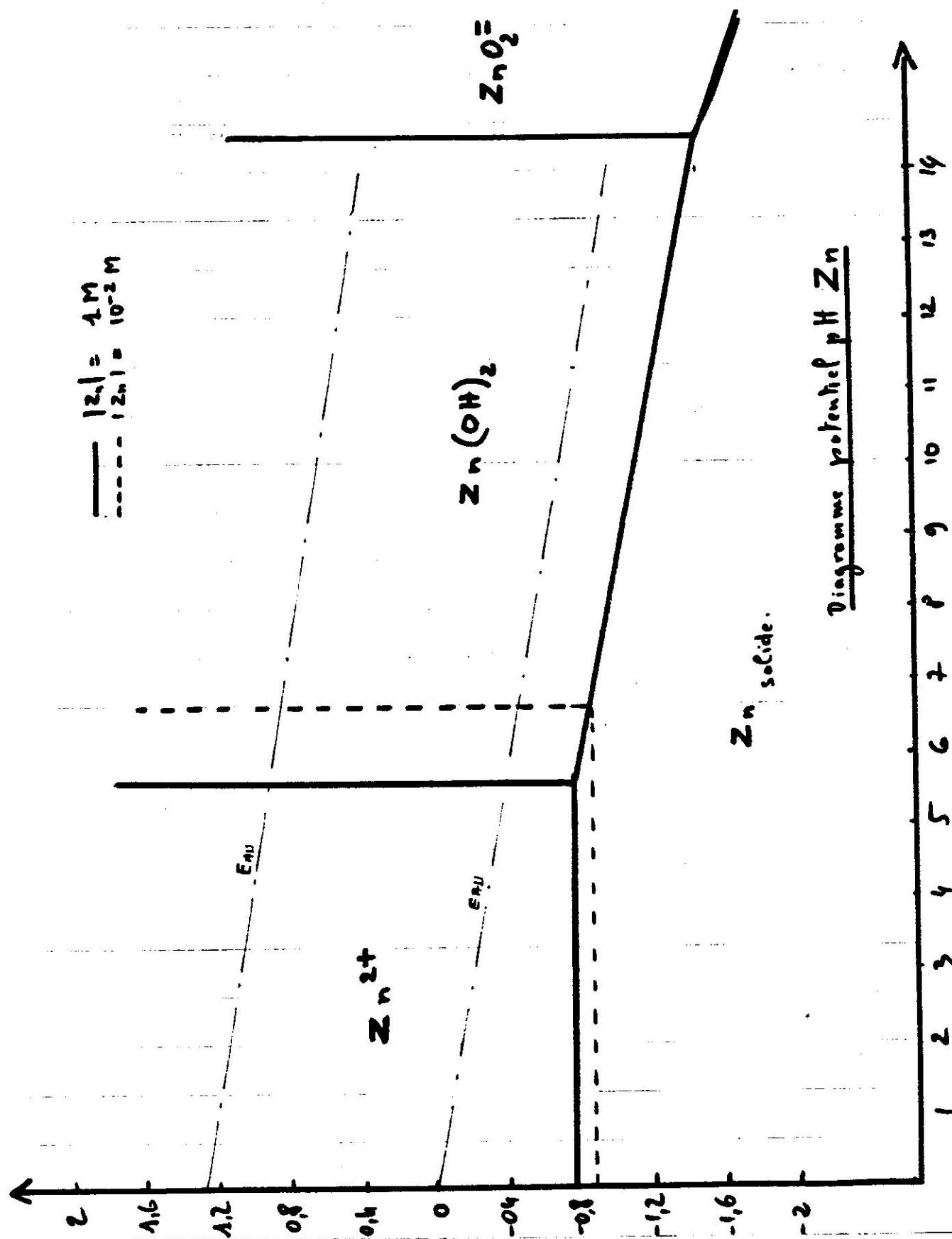
2ÈME PARTIE

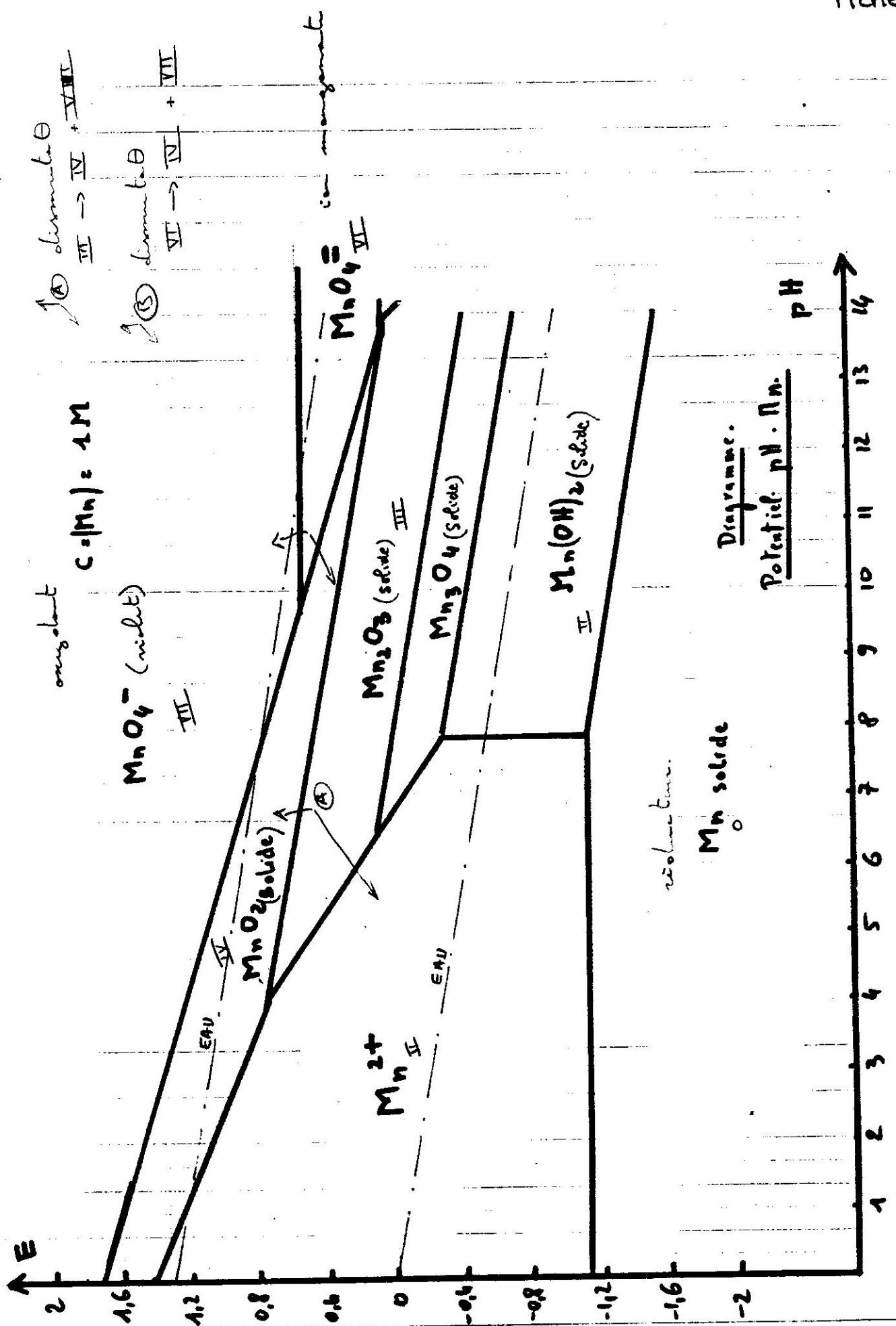


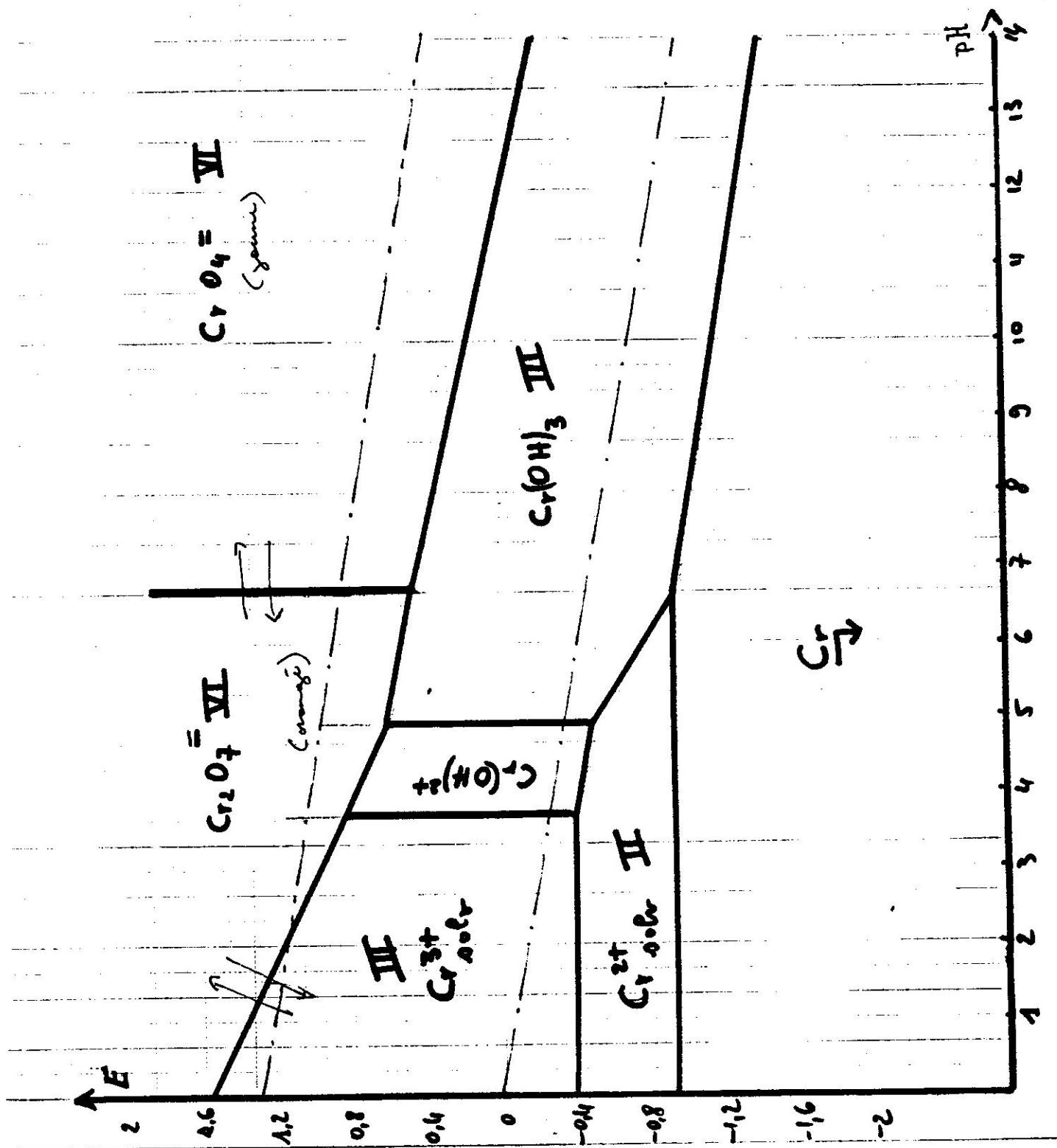


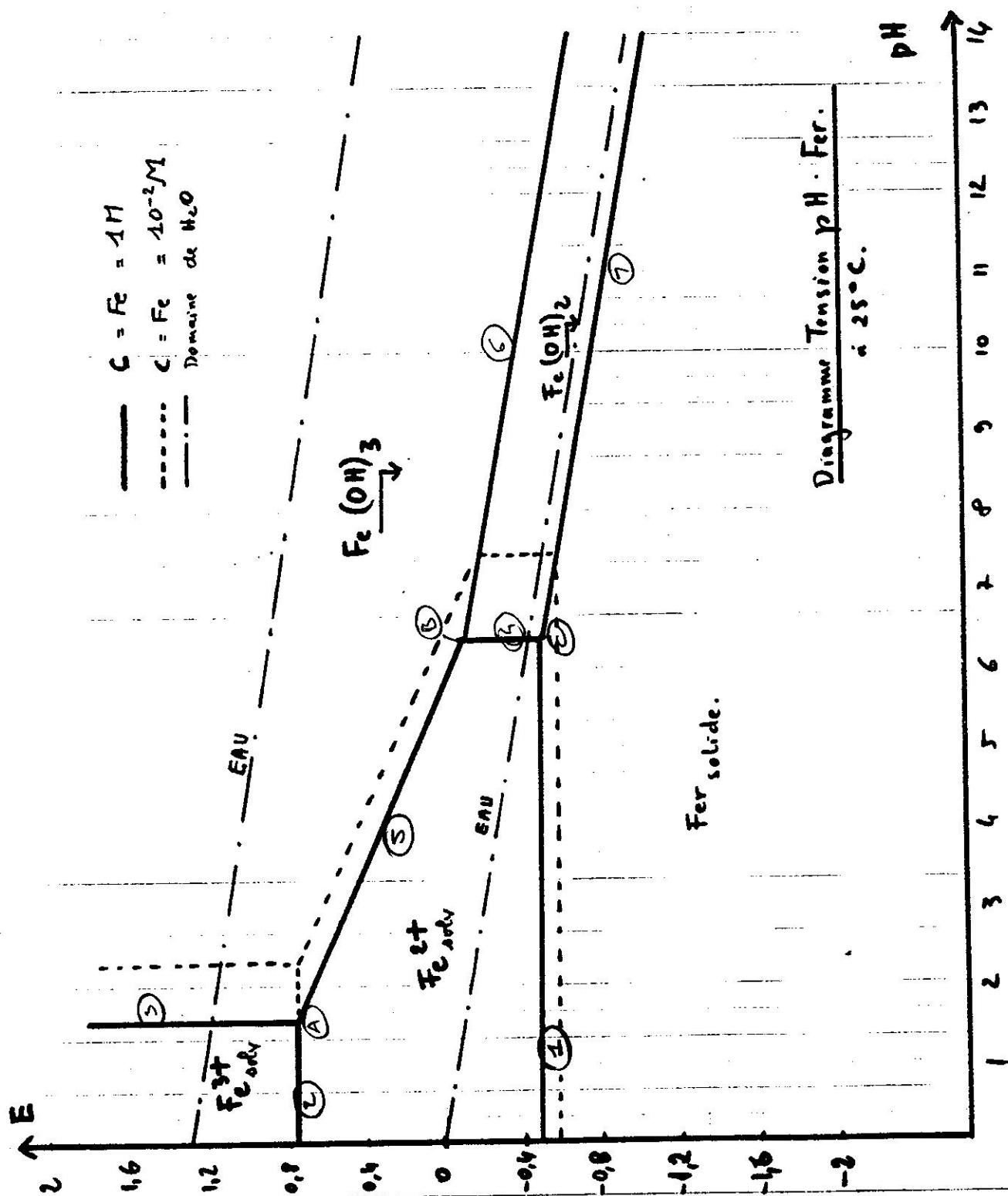


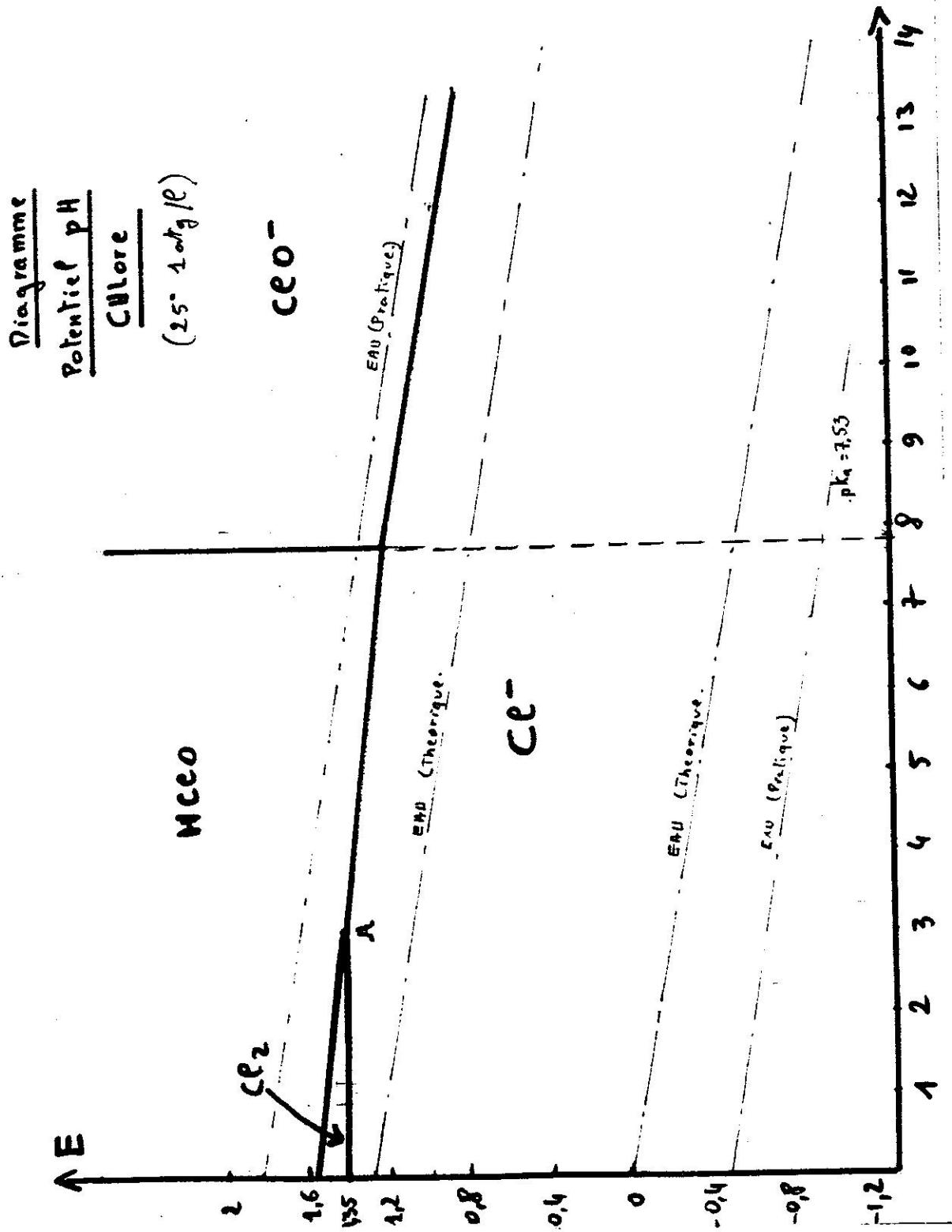


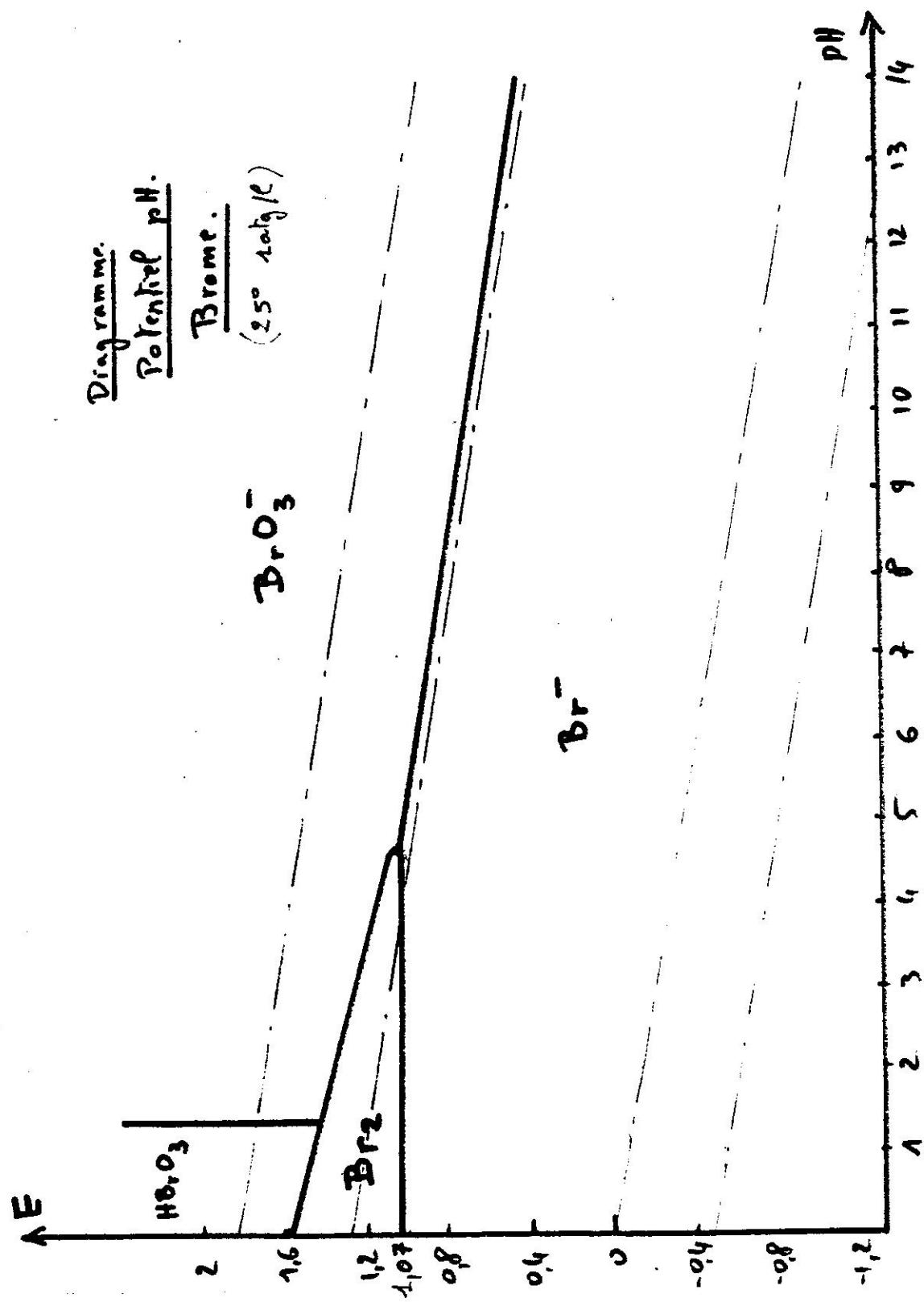


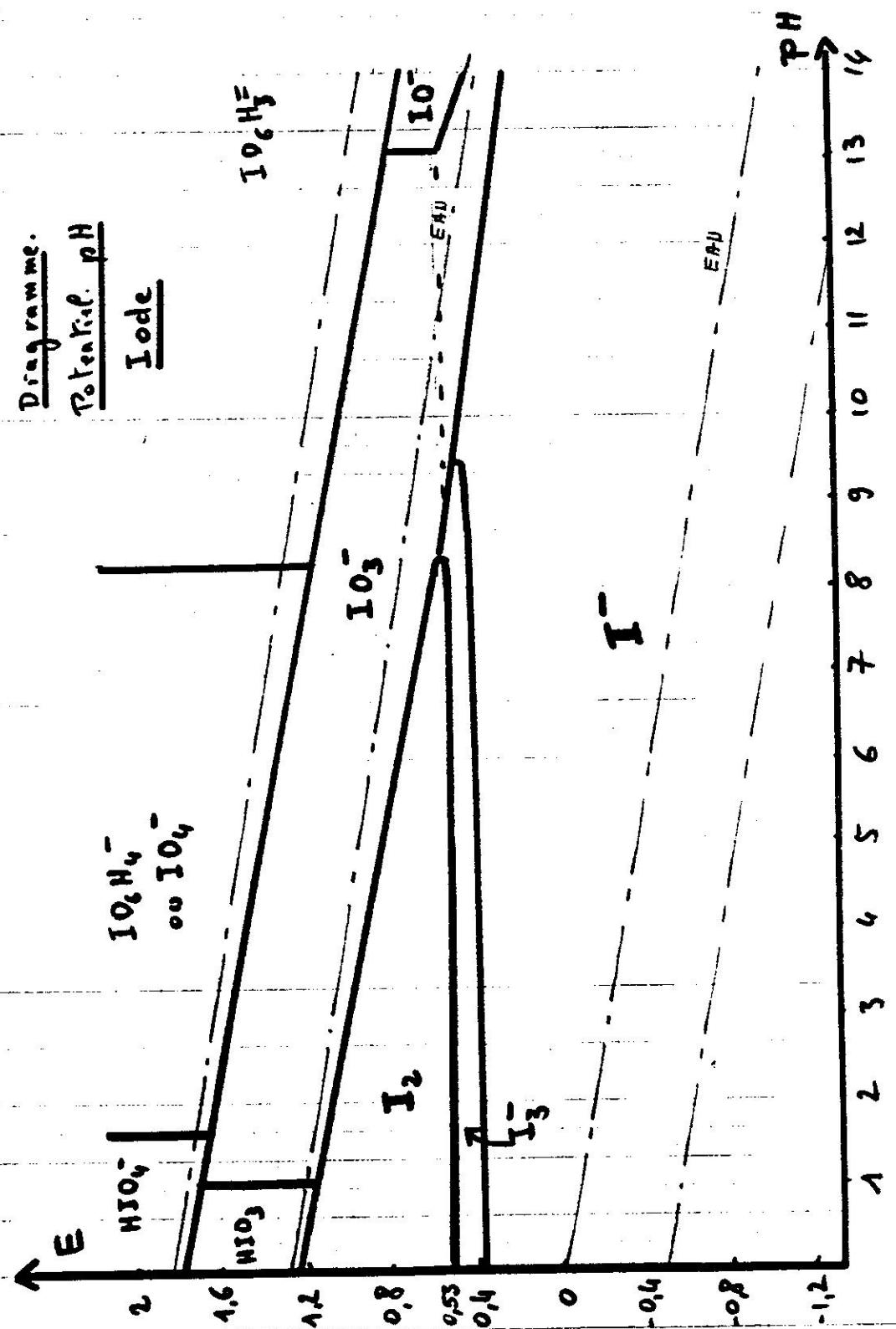


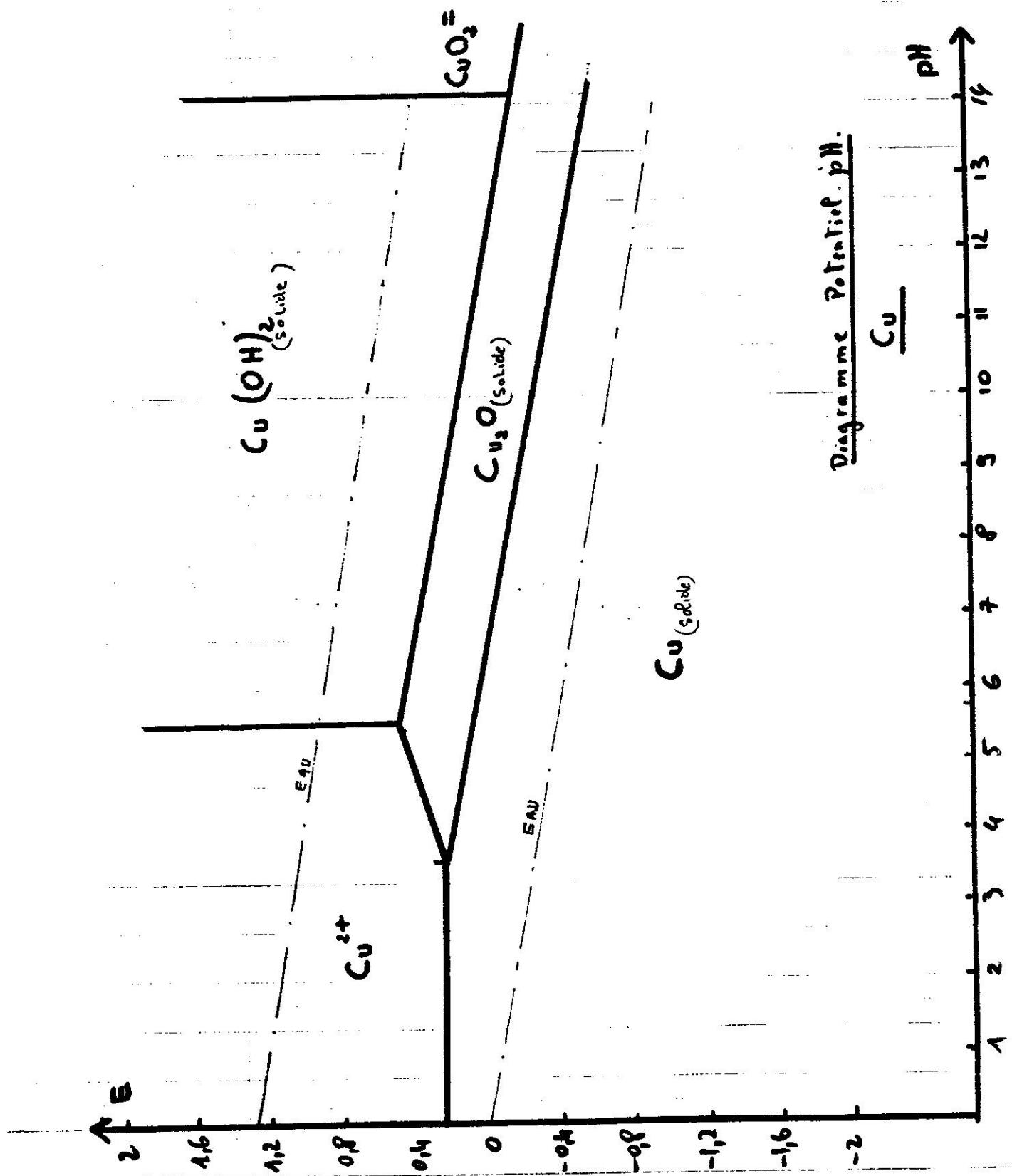


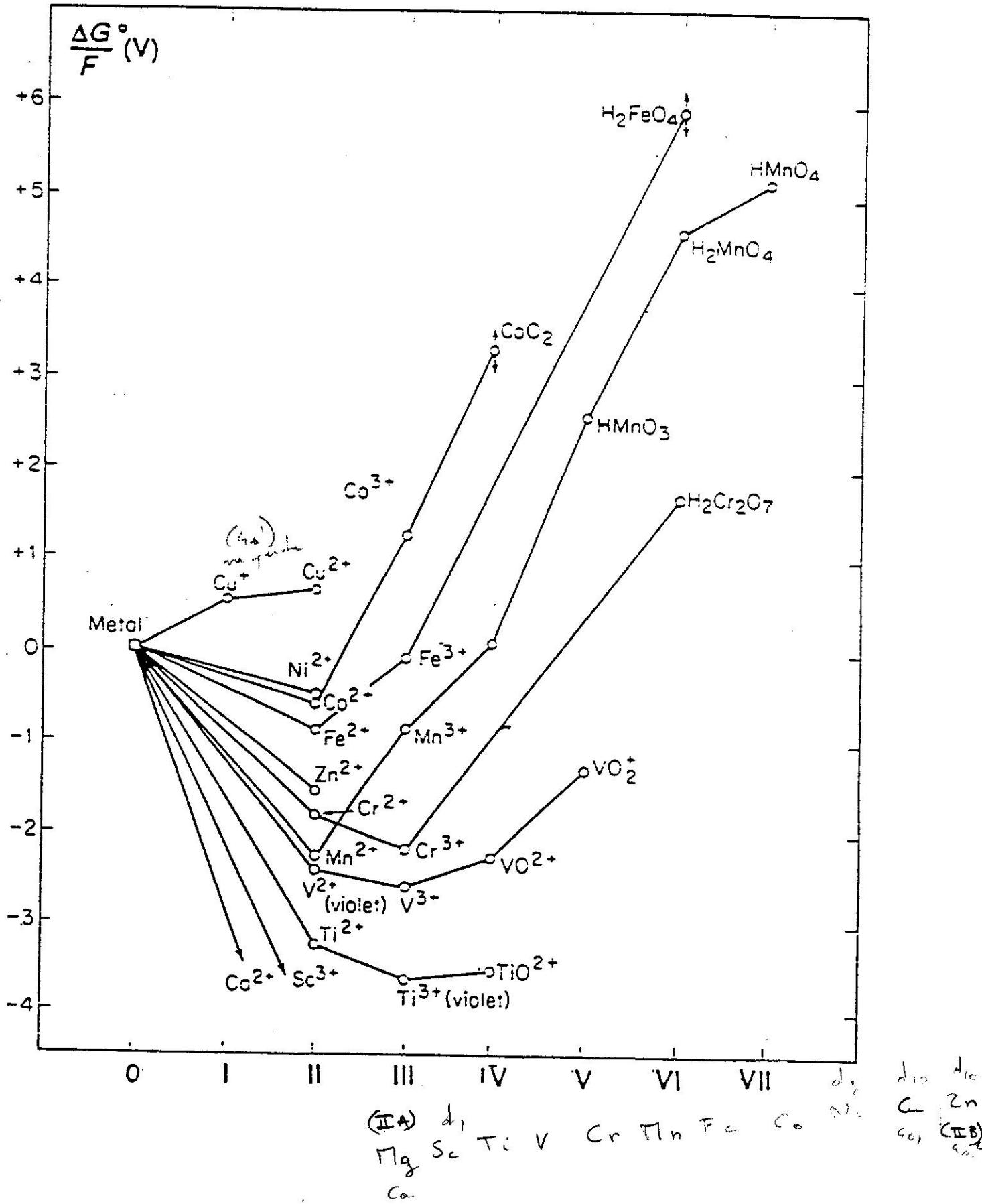


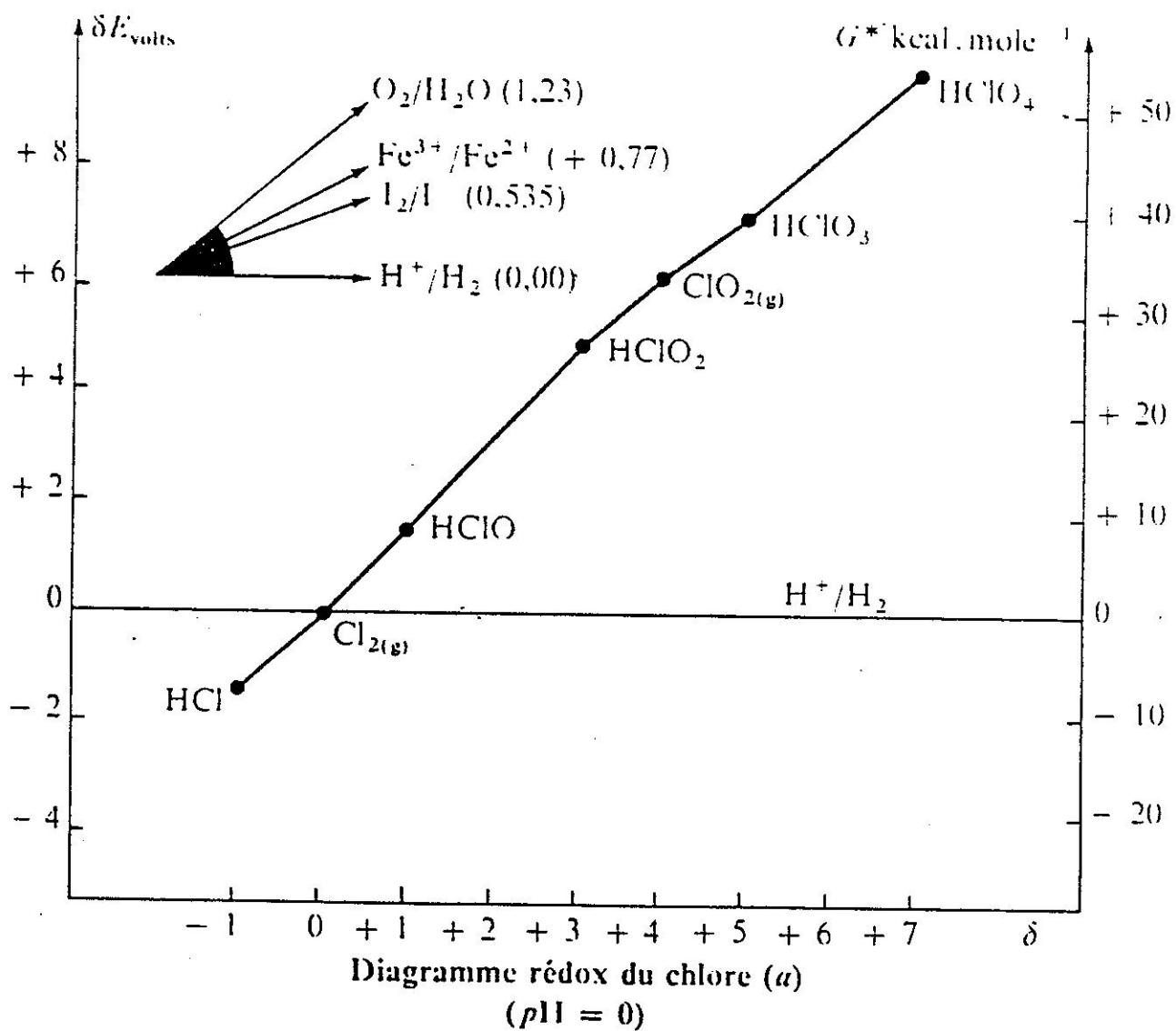


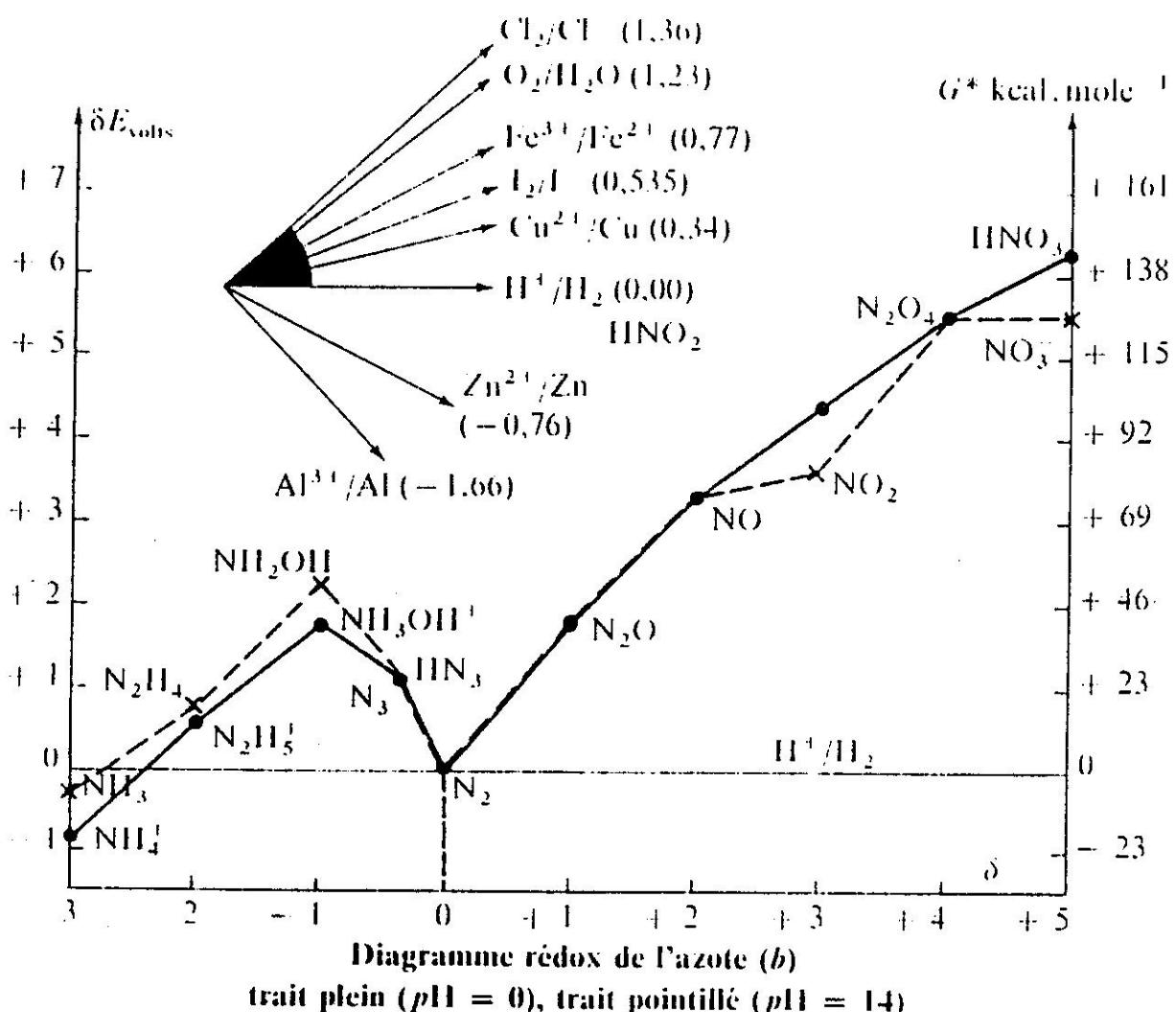












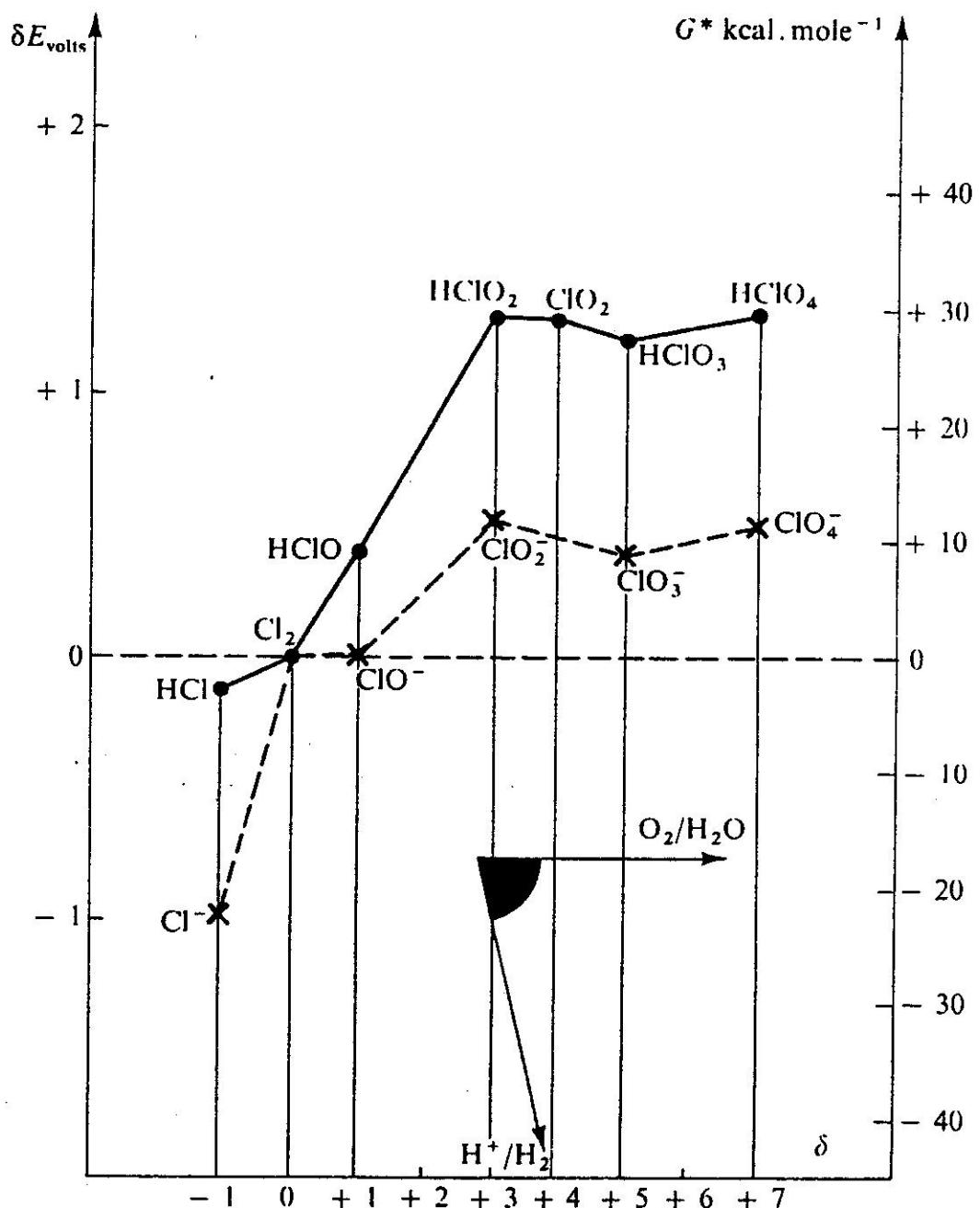
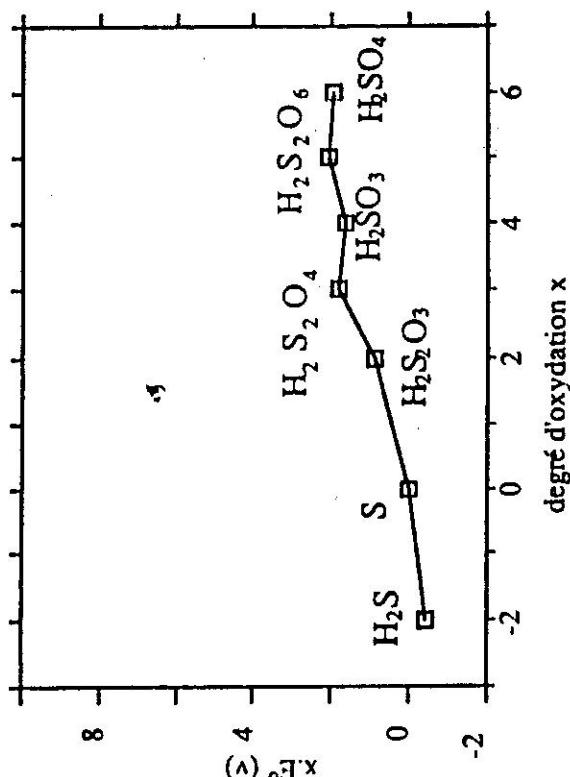
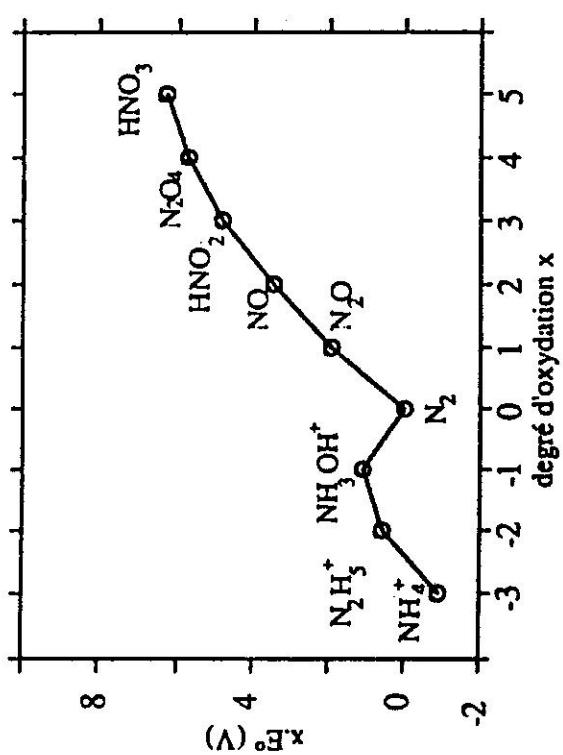
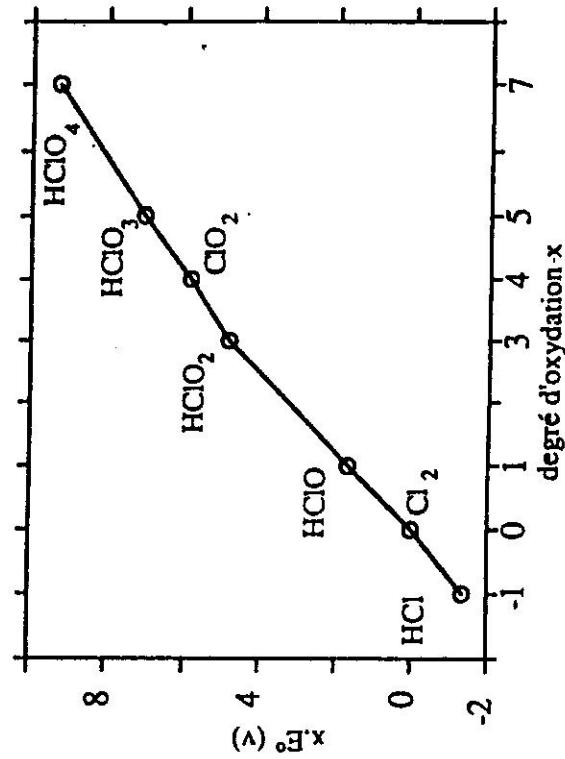
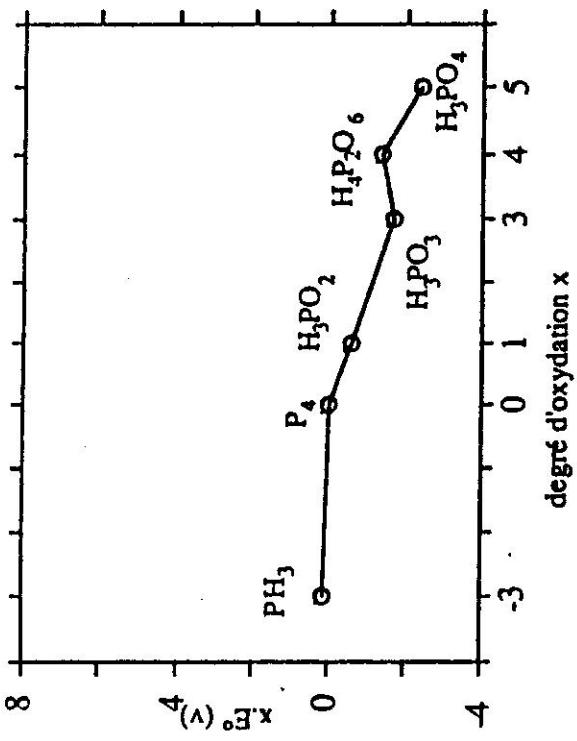
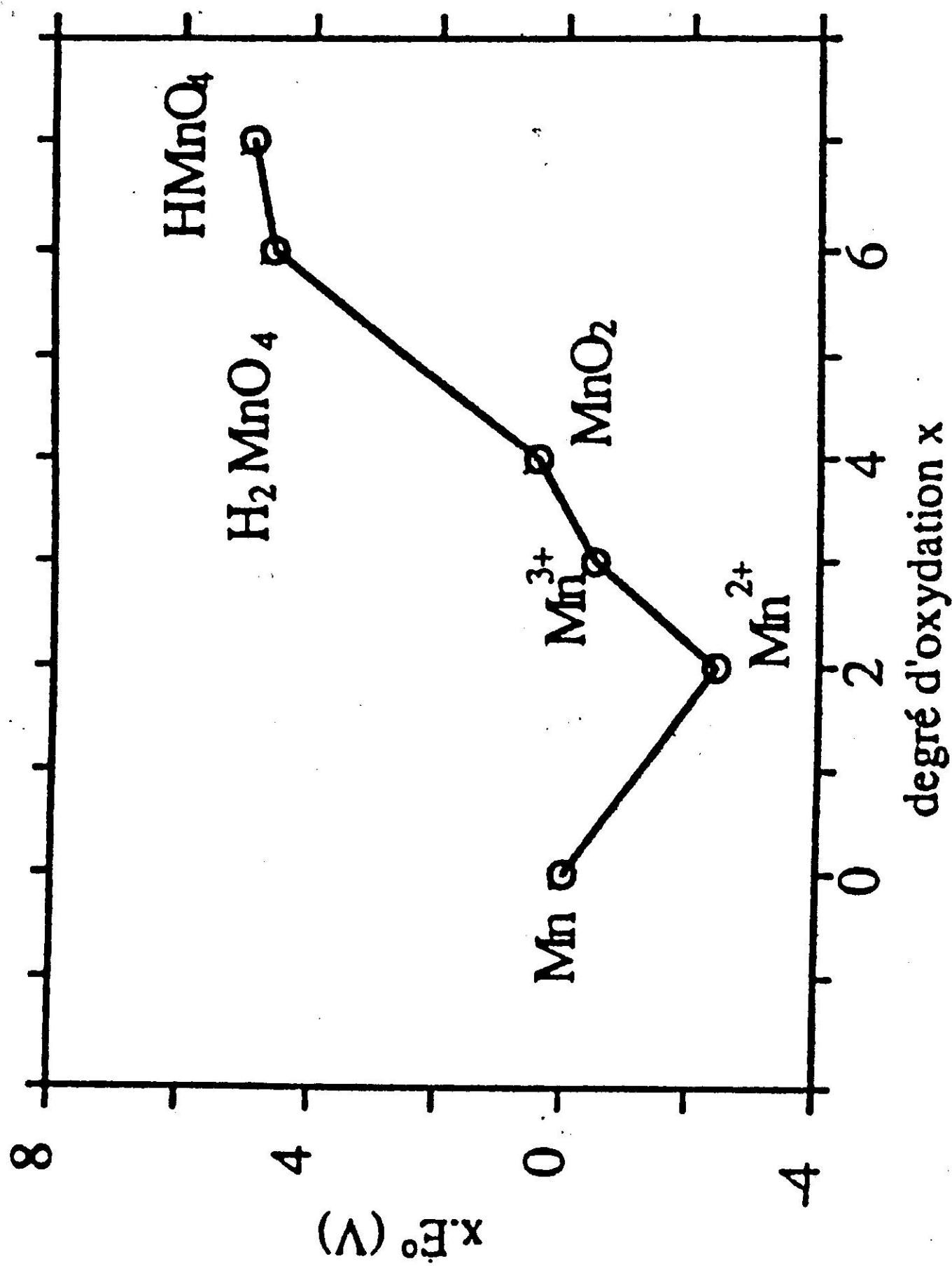


Diagramme rédox du chlore à 25 °C (couple de référence $\text{O}_2/\text{H}_2\text{O}$)
 trait plein ($\text{pH} = 0$) trait pointillé ($\text{pH} = 14$).





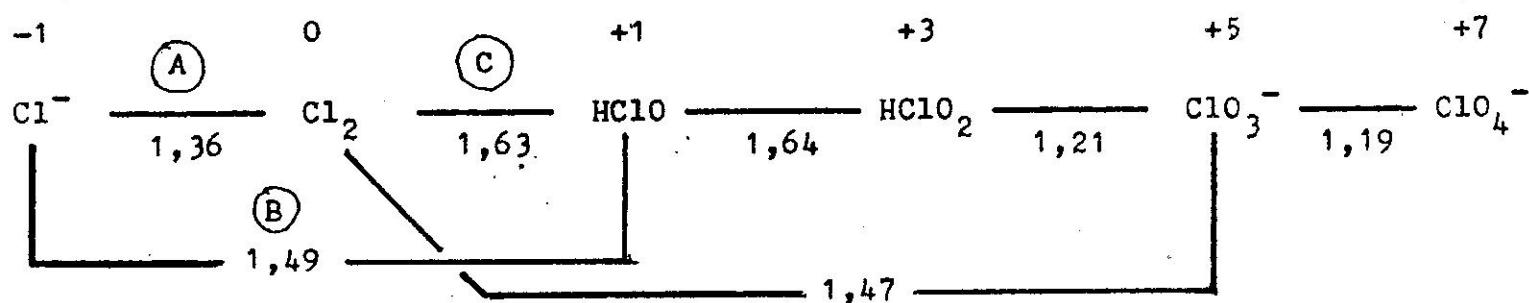


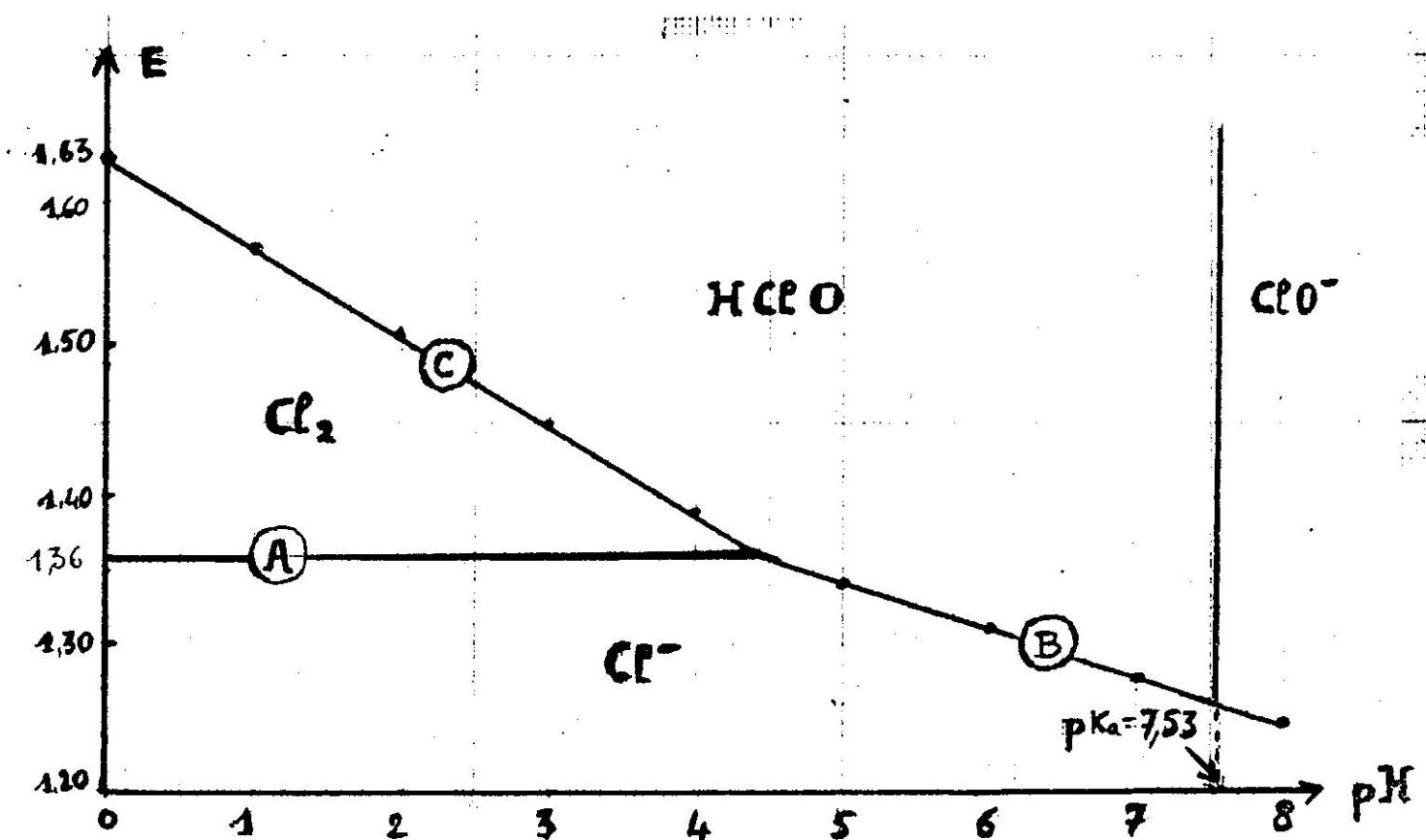
Diagramme de LATIMER à (ph = 0)

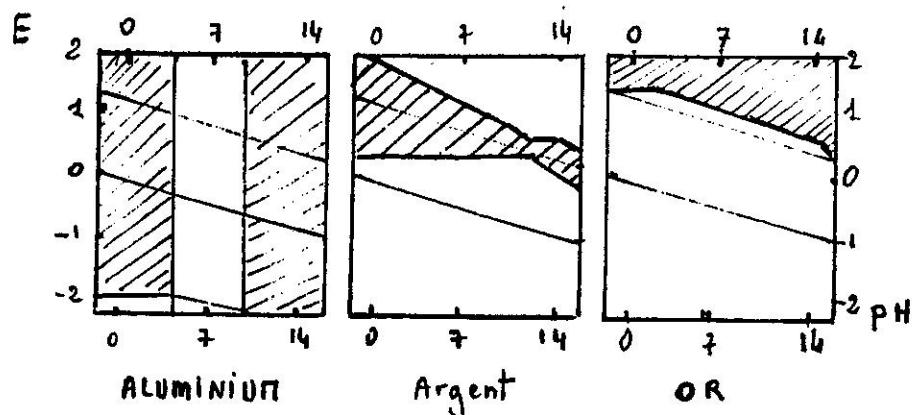
Équilibres.-

- (A) $\text{Cl}_2(\text{sol}) + 2 \text{e}^- \rightleftharpoons 2 \text{Cl}^- \quad E_A = 1,36 + 0,03 \log \frac{[\text{Cl}_2]}{[\text{Cl}^-]^2}$
- (B) $\text{HClO} + \text{H}^+ + 2\text{e}^- \rightleftharpoons \text{Cl}^- + \text{H}_2\text{O} \quad E_B = 1,49 - 0,03 \text{ pH} + 0,03 \log \frac{[\text{HClO}]}{[\text{Cl}^-]}$
- (C) $2\text{HClO} + 2\text{H}^+ + 2\text{e}^- \rightleftharpoons \text{Cl}_2 + 2\text{H}_2\text{O}$

Cet équilibre C résulte de 2(B)-(A) soit $E_C = 2E_B - E_A$

$$\text{d'où } E_C = 1,63 - 0,06 \text{ pH} + 0,03 \log \frac{[\text{HClO}]^2}{[\text{Cl}_2]}$$



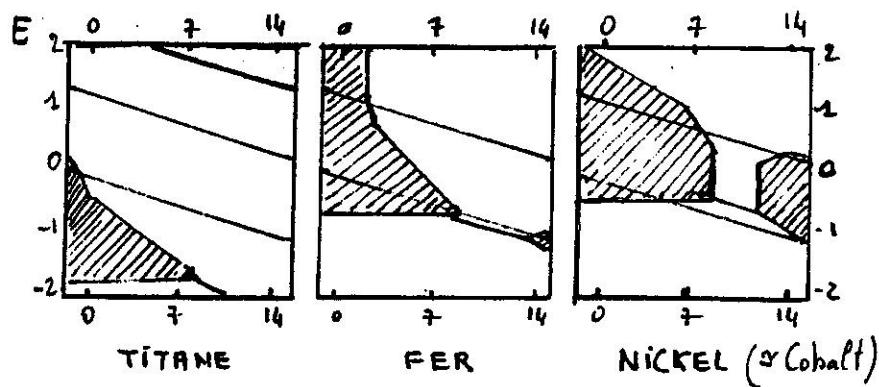


(I)

METAUX RESISTANTS A L'EAU PURE

Les zones hachurées indiquent les domaines théoriques de corrosion

Les zones non hachurées indiquent les domaines théoriques d'immunité et de passivation.



(2)

METAUX PASSIVABLES ET ACTIVABLES

Les zones hachurées indiquent les domaines théoriques de corrosion

Les zones non hachurées indiquent les domaines théoriques d'immunité et de passivation