

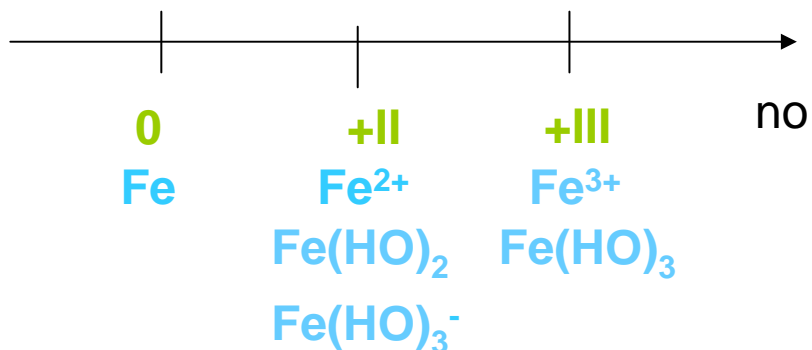
DIAGRAMME POTENTIEL-pH du FER

Données : $E^{\circ}_1 (\text{Fe}^{3+} / \text{Fe}^{2+}) = 0,77 \text{ V}$; $E^{\circ}_2 (\text{Fe}^{2+} / \text{Fe}) = - 0,44 \text{ V}$
 $\text{pK}_{s2} (\text{Fe}(\text{HO})_2) = 15,1$ $\text{pK}_{s1} (\text{Fe}(\text{HO})_3) = 38$ $\text{pK}_f (\text{Fe}(\text{HO})_3^-) = 5,1$

On prendra les concentrations des espèces dissoutes égales à 1 mol/L

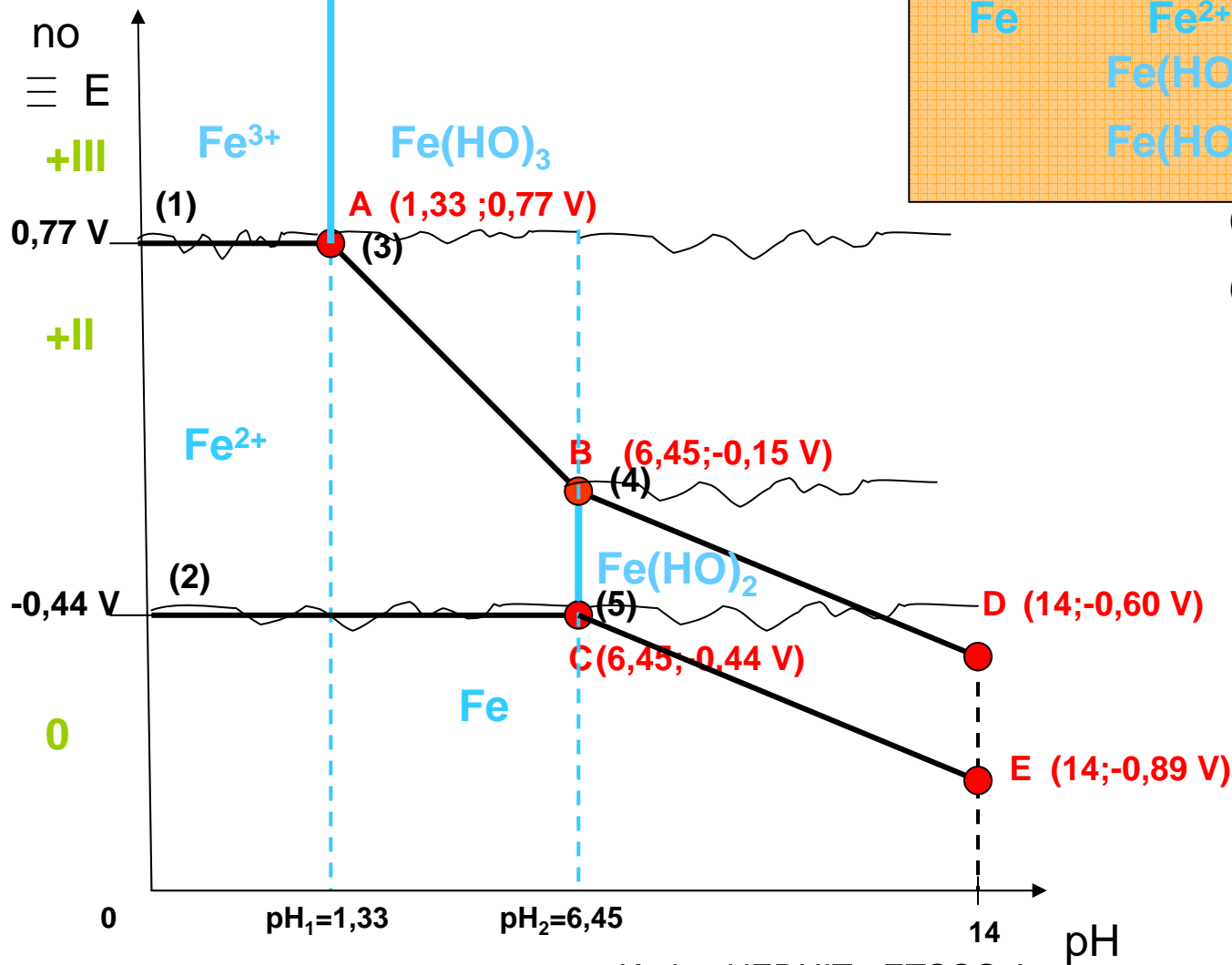
1- Espèces mises en jeu: Fe^{3+} Fe^{2+} Fe $\text{Fe}(\text{HO})_2$ $\text{Fe}(\text{HO})_3$ $\text{Fe}(\text{HO})_3^-$
+III +II 0 +II +III +II

2- Echelle des n.o:



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3- n.o= f(pH): $C_0 = 1 \text{ mol.L}^{-1}$



0	+II	+III	no
Fe	Fe ²⁺	Fe ³⁺	
	Fe(OH) ₂	Fe(OH) ₃	
		Fe(OH) ₃ ⁻	

- (1): $E_1 = 0,77 \text{ V}$
- (2): $E_2 = -0,44 \text{ V}$
- (3): $E_3 = 1,01 - 0,18 \text{ pH}$
- (4): $E_4 = 0,237 - 0,06 \text{ pH}$
- (5): $E_5 = -0,053 - 0,06 \text{ pH}$

Diagramme potentiel-pH du fer

$C_0 = 1 \text{ mol.L}^{-1}$

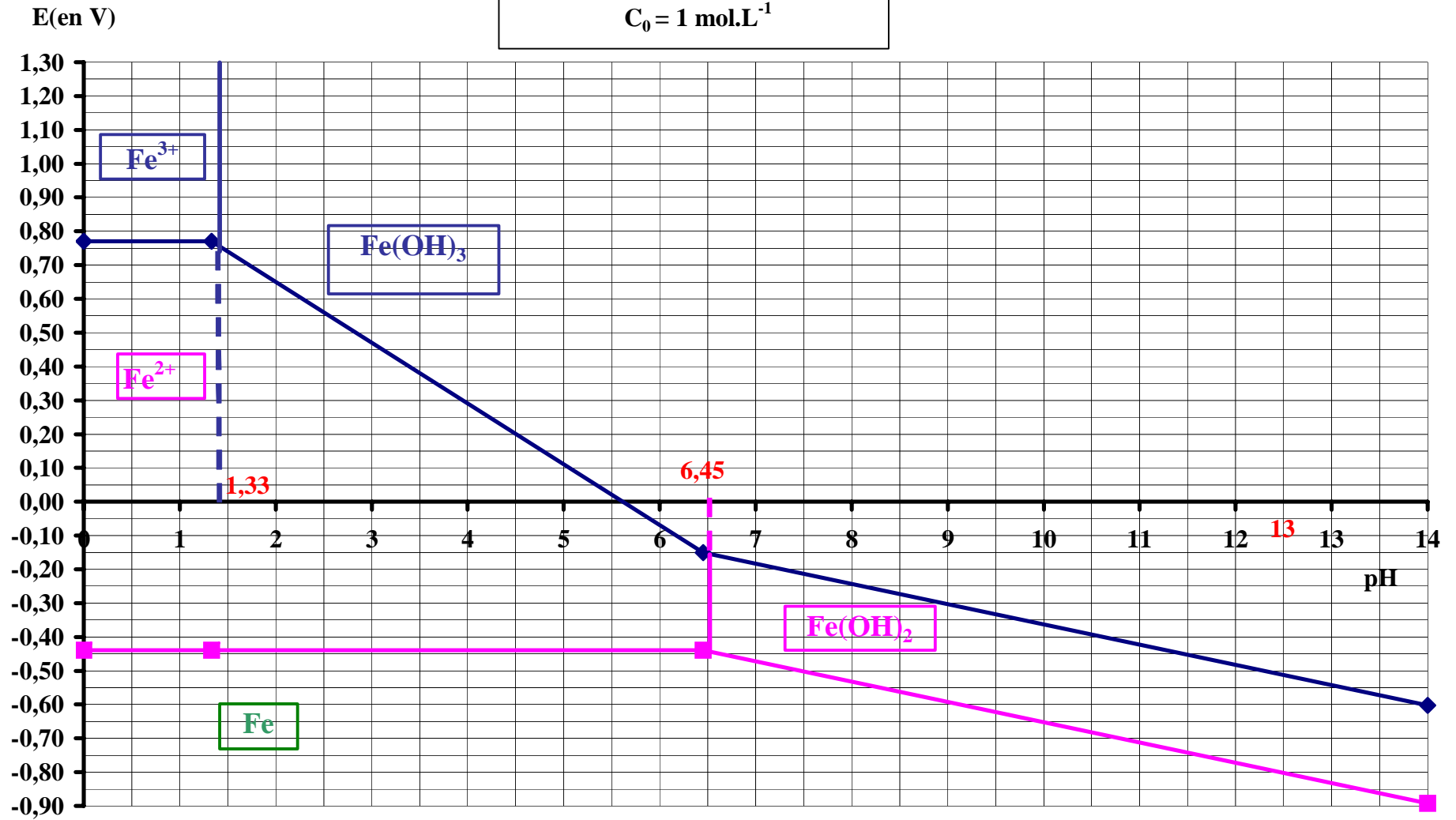


Diagramme potentiel-pH du fer
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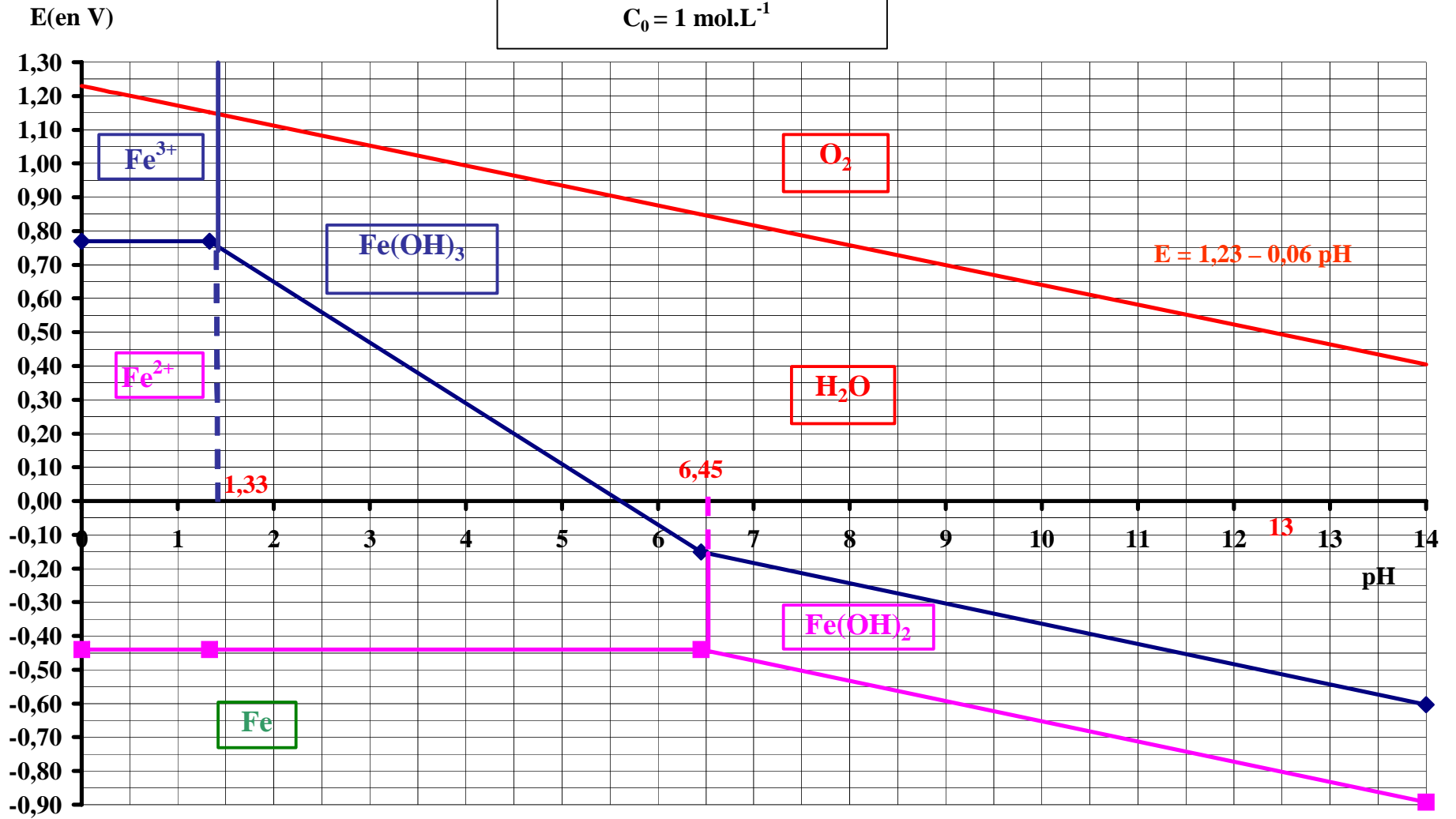
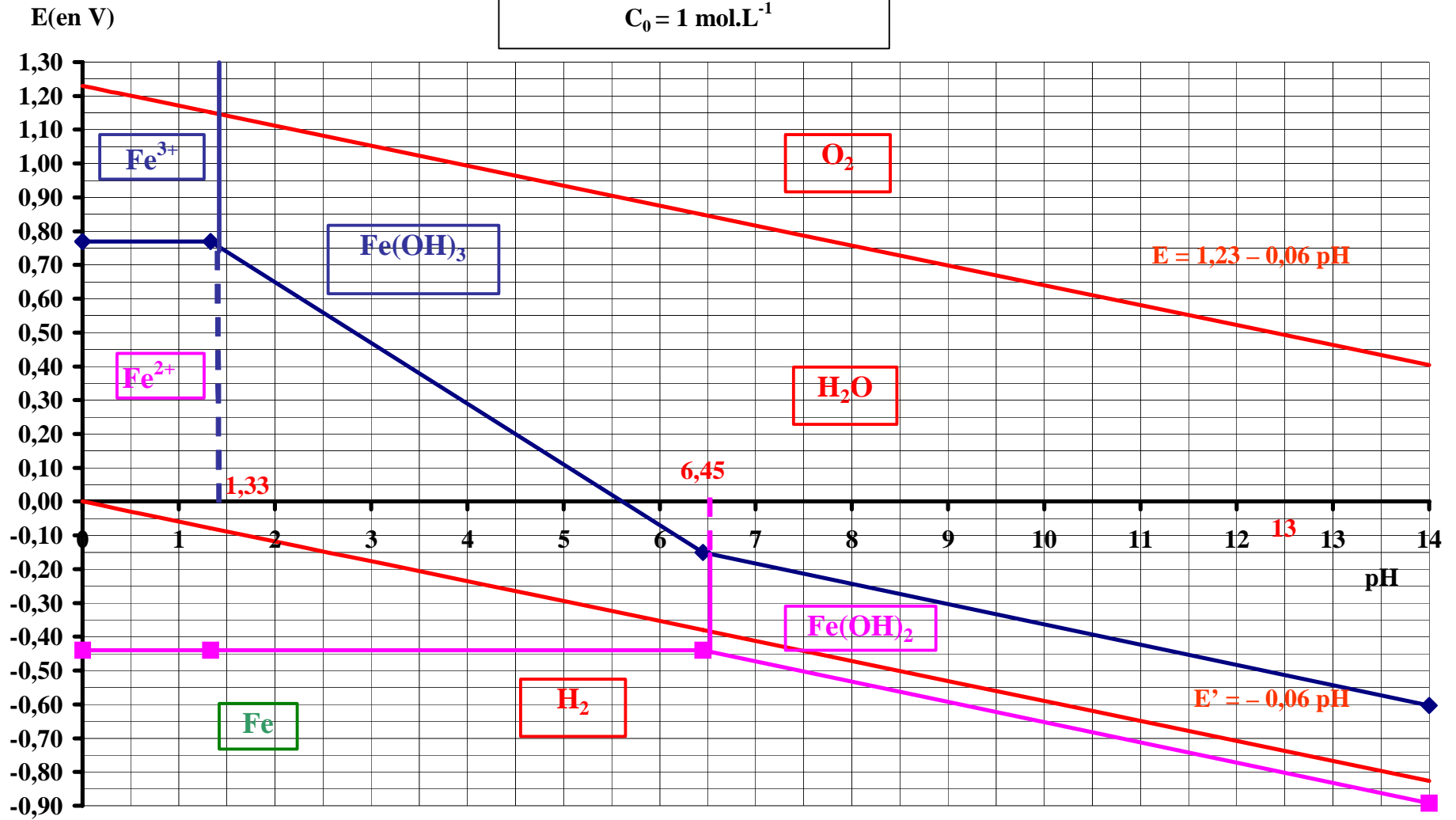
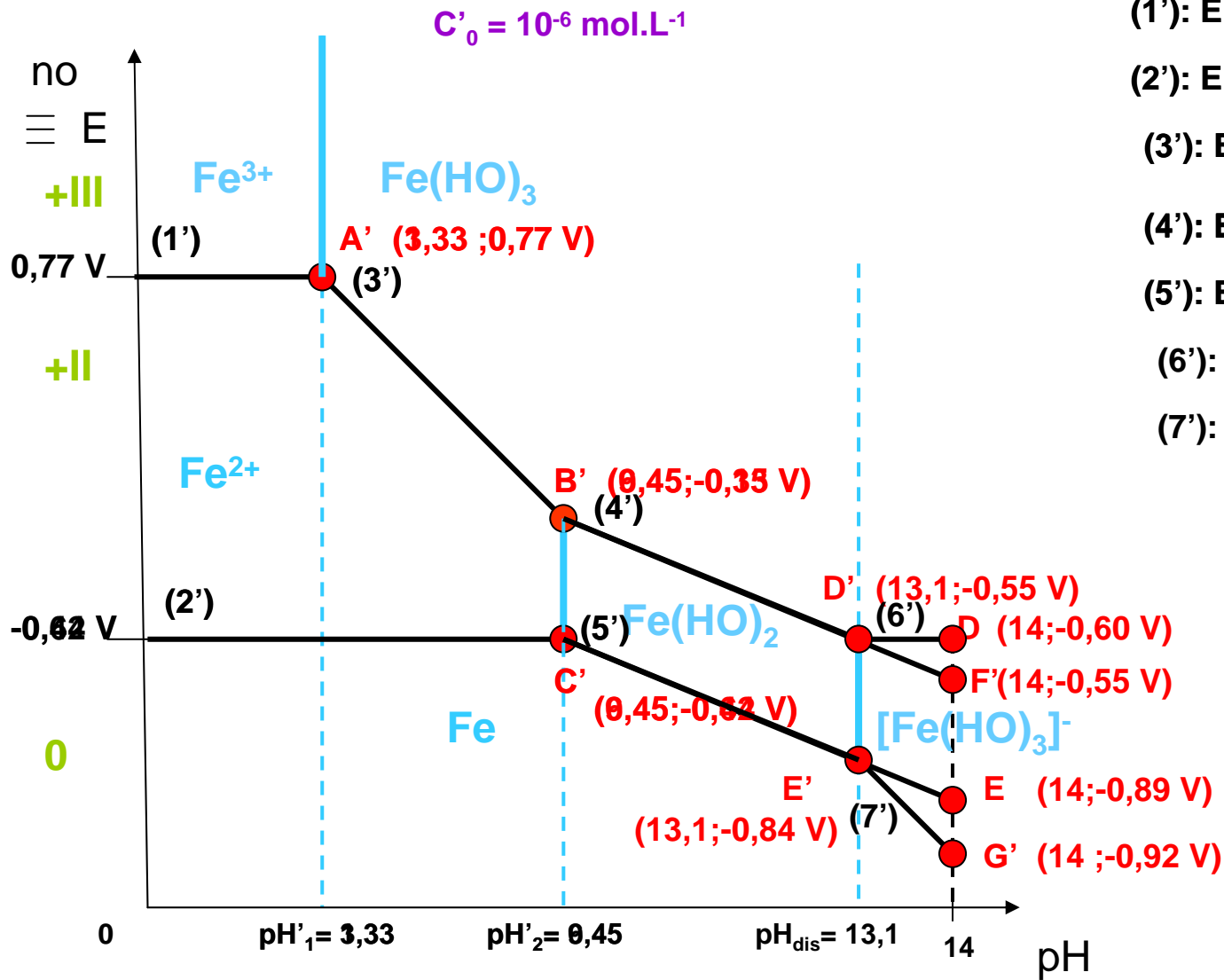


Diagramme potentiel-pH du fer
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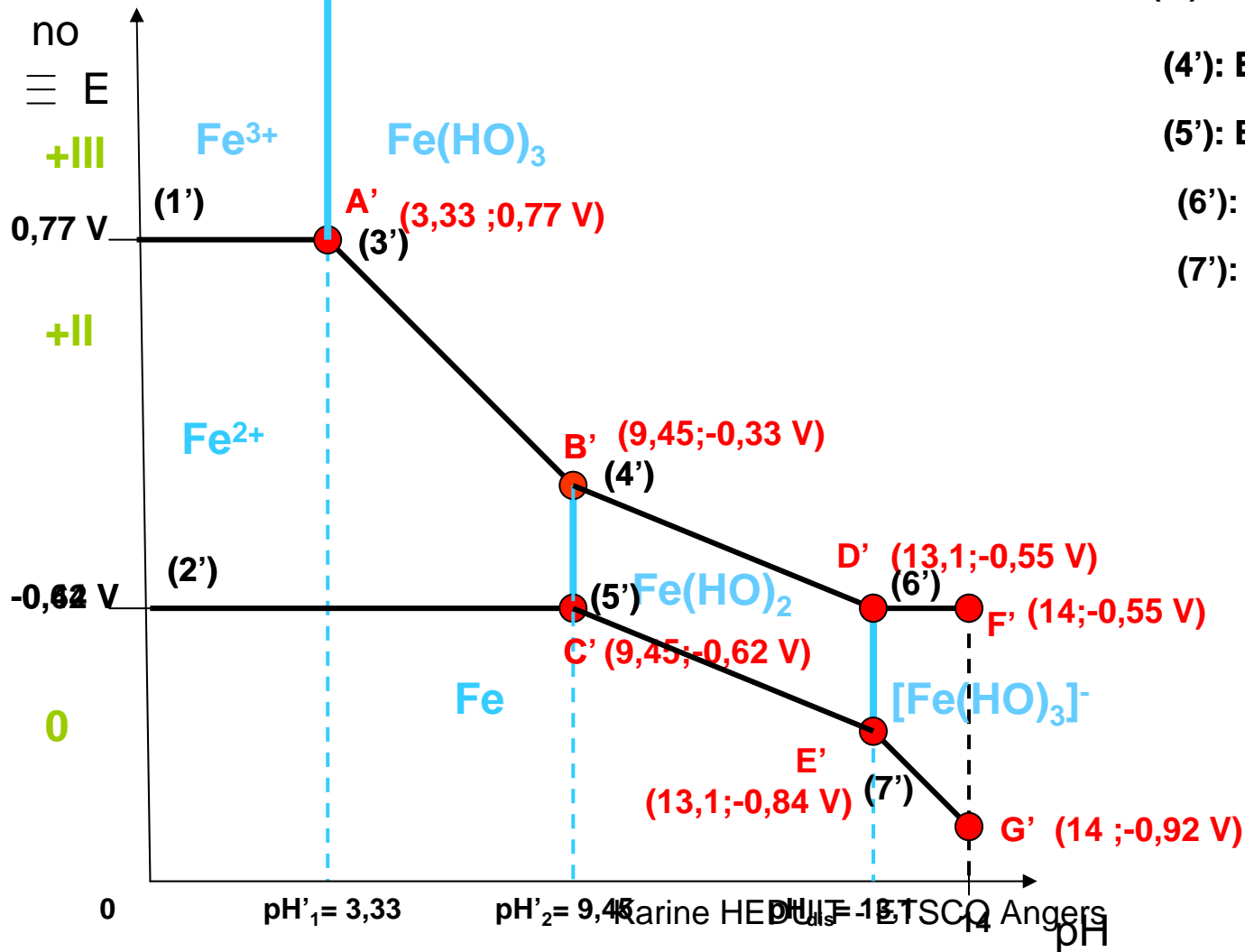
Données : $E^{\circ}_1 (\text{Fe}^{3+}/\text{Fe}^{2+}) = 0,77 \text{ V}$; $E^{\circ}_2 (\text{Fe}^{2+}/\text{Fe}) = -0,44 \text{ V}$
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- (1'): $E'_1 = 0,77 \text{ V}$
- (2'): $E'_2 = -0,62 \text{ V}$
- (3'): $E'_3 = 1,07 - 0,18 \text{ pH}$
- (4'): $E'_4 = 0,237 - 0,06 \text{ pH}$
- (5'): $E'_5 = -0,053 - 0,06 \text{ pH}$
- (6'): $E'_6 = -0,55 \text{ V}$
- (7'): $E'_7 = 0,34 - 0,09 \text{ pH}$

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$C'_0 = 10^{-6} \text{ mol.L}^{-1}$



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(2'): $E'_2 = -0,62 \text{ V}$

(3'): $E'_3 = 1,37 - 0,18 \text{ pH}$

(4'): $E'_4 = 0,237 - 0,06 \text{ pH}$

(5'): $E'_5 = -0,053 - 0,06 \text{ pH}$

(6'): $E'_6 = -0,55 \text{ V}$

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Diagramme potentiel-pH du fer
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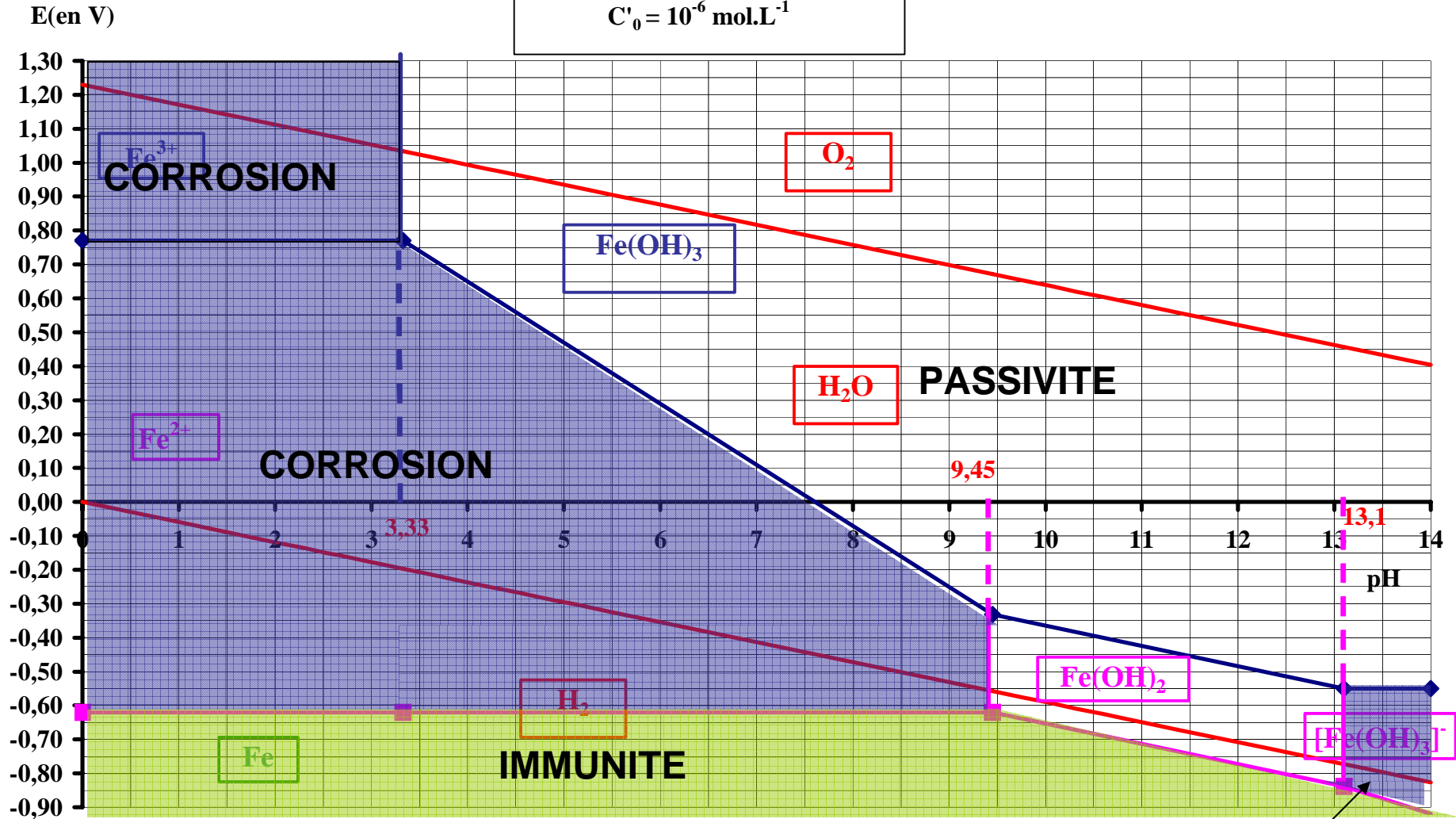


Diagramme potentiel-pH du fer

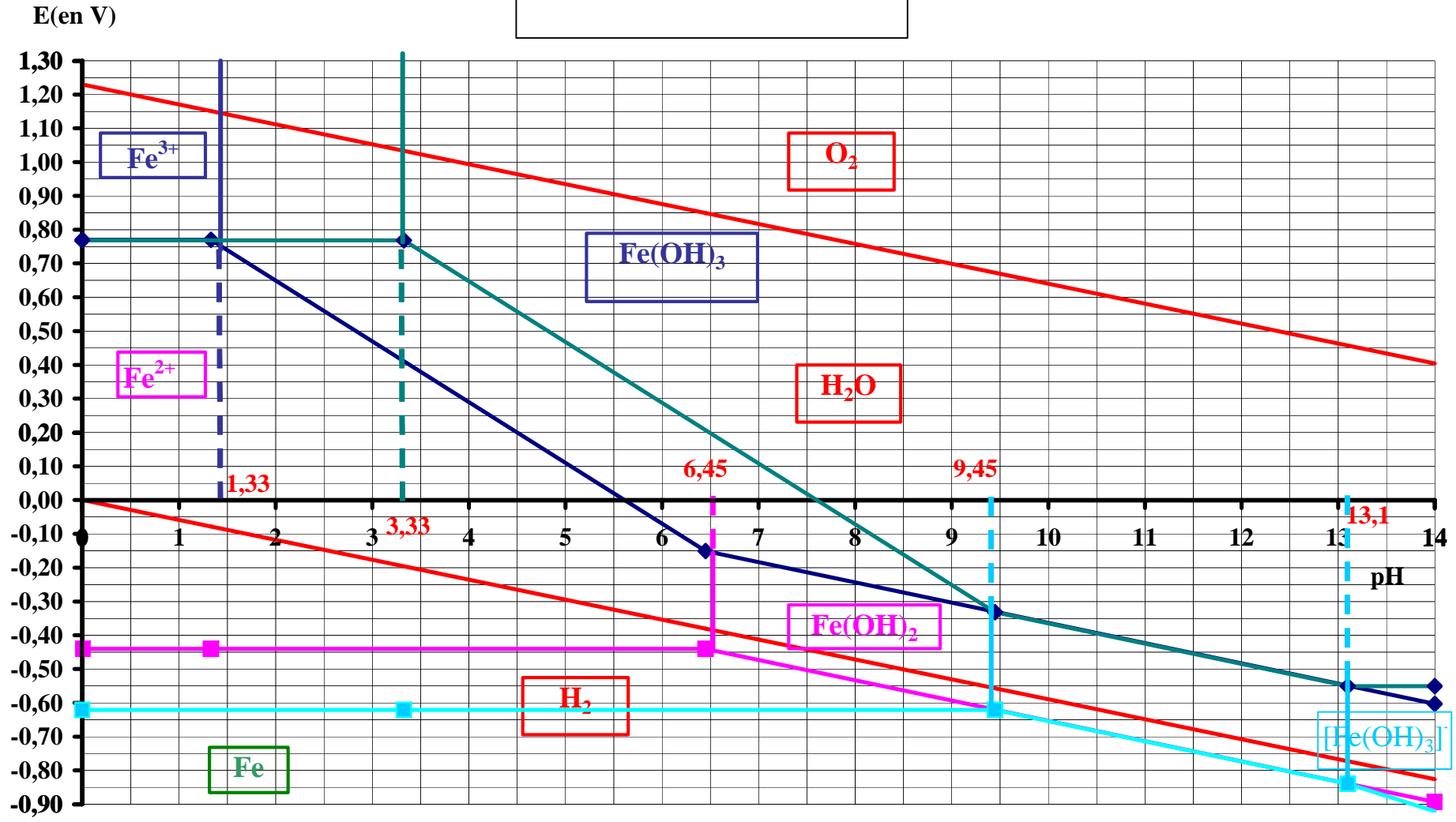


Diagramme potentiel-pH du fer
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