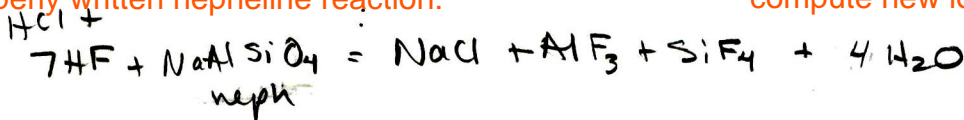




$$\Delta G = -RT \ln K$$

properly written nepheline reaction:

compute new logK(1)

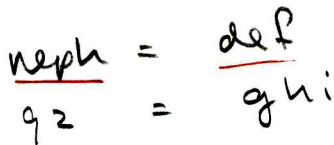


Four reactions:

compute w/  
new data



$$\textcircled{2} \log K_2 \text{ Gastherm}$$



$$\textcircled{3} \log K_3 \leftarrow *$$

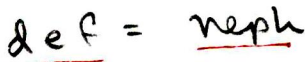
$$\textcircled{4} \log K_4 \text{ gastherm}$$

\*unknown →

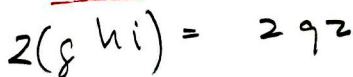
note: "a,b,c,d,e,f,g,h,i," are just place holders for the proper gas species, but all of them cancel out in the end.



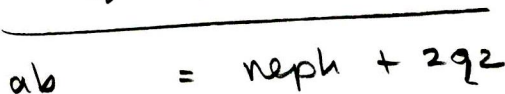
$$\log K_2$$



$$-\log K_3 *$$



$$-2\log K_4$$



$$\log K_1$$

$$\log K_1 = \log K_2 - \log K_3 - 2\log K_4$$

$$\log K_3 = \underline{-\log K_1 + \log K_2 - 2\log K_4}$$

new log K(3) at each T for the nepheline reaction as written above with proper gas species. see email note about compatibility of minerals