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On the thermodynamic data of kaolinite

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For deposit: Table 2

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Table 2: Limits and constraints used for the retrieval of $\Delta_f H^\circ$ and S° for kaolinite and pyrophyllite

Limits:

$239.8 > S^\circ_{Prl} > 239.0$, $-5593896 > \Delta_f H^\circ_{Prl} > -5706904$ (in Joules/mole)

$202.25 > S^\circ_{Kln} > 185.0$, $-4174936.0 > \Delta_f H^\circ_{Kln} < -4039304.0$ (in Joules/mole)

Constraints:

For each reaction, assemblages on the right hand side of the ">" sign are stable at the P and T conditions specified. Italicized constraints were only used to obtain the unique solution at $S^\circ_{Kln} = 187.44$, but not the area of feasible solutions indicated in the text.

Label	T (°C)	P (bars)	Reaction
Ze-1	25	500	Kln + lAb < 2 αQz + Pg + H_2O
Ze-2	*90*	*1000*	*Kln + lAb < 2 αQz + Pg + H_2O*
Ze-3	200	1000	Kln + lAb > 2 αQz + Pg + H_2O
C84-1	400	3000	Prl < 4 αQz + Cor + H_2O
C84-2	435	5000	Prl < 4 αQz + Cor + H_2O
C84-3	450	7000	Prl < 4 αQz + Cor + H_2O
C84-4	485	10625	Prl < 4 αQz + Cor + H_2O
C84-5	475	3000	Prl > 4 αQz + Cor + H_2O
C84-6	510	5000	Prl > 4 αQz + Cor + H_2O
C84-7	562	10000	Prl > 4 αQz + Cor + H_2O
HH73-1	390	3625	Prl < And + 3 αQz + H_2O
HH73-2	410	4875	Prl < And + 3 αQz + H_2O
HH73-3	450	7185	Prl < And + 3 αQz + H_2O
HH73-4	420	3500	Prl > And + 3 αQz + H_2O
HH73-5	440	4685	Prl > And + 3 αQz + H_2O
N72-1	400	9625	4 Lw + 2 αQz < 6 H_2O + 2 Zo + Prl
N72-2	360	7180	4 Lw + 2 αQz < 6 H_2O + 2 Zo + Prl
N72-3	440	6800	4 Lw + 2 αQz > 6 H_2O + 2 Zo + Prl
N72b1	460	6800	12 Lw > Prl + 6 Zo + 2 Ky + 20 H_2O
N72b2	375	3870	12 Lw > Prl + 6 Zo + 2 Ky + 20 H_2O
N72b3	375	7180	12 Lw < Prl + 6 Zo + 2 Ky + 20 H_2O
N72b4	400	9680	12 Lw < Prl + 6 Zo + 2 Ky + 20 H_2O
Hem-1	285	1000	Kln + 2 αQz > Prl + H_2O
Mc-1	330	5000	Kln + 2 αQz > Prl + H_2O
Mc-2'	*300*	*5550*	*Kln + 2 αQz < Prl + H_2O*
Th-1	330	1000	Kln + 2 αQz > Prl + H_2O
Th-2	350	2000	Kln + 2 αQz > Prl + H_2O
Th-4	390	4000	Kln + 2 αQz > Prl + H_2O