

ite + 8 quartz) are summarized  
els at water vapour pressure or

3	340	330
An	W(An)	W

system and quartz are listed in

5	260	160	115
Q	A,Q	A,Q	A,Q

composition  $\text{Na}_2\text{O}$ ,  $\text{Al}_2\text{O}_3$ ,  $18\text{SiO}_2$   
of these solutions is lower than  
lar  $\text{NaHCO}_3$  is about 9.0 and of  
(ELLIS and FYFE, 1957). The

Products

L.A.C.Q  
.M.Q  
A.).(M).Q  
.M.Q  
.Ab.Q  
L.A.C.Q  
L.A.Q  
b.Q  
b.Q

vity of the starting materials  
mixed with quartz and active  
onite. Results are summarized

320	315	310	265
w.v.p	5000	2000	4000
W.Q	W.E.Q	W.E.Q	E.Q

# The zeolite facies, with comments on the interpretation of hydrothermal syntheses

A1.7.2. *Nepheline*. A study was made of the reaction of nepheline from the Haliburton-Bancroft area, Ontario, with natural quartz, Table 12.

Table 12

$T(^{\circ}\text{C})$	396	385	380	360	346	338	335	310	250
$P$ (bars)	2000	2000	2000	2000	2000	2000	2000	2000	w.v.p.
Products	Ab.Q	Ab.Q	Ab.Q	Ab.A.Q.	A(Ab)Q	A.Q	A.Q	A.Q	A.Q

A1.7.3. *Stilbite*. A few experiments were conducted on the breakdown of stilbite from an unknown locality (Table 13).

Table 13

$T(^{\circ}\text{C})$	315°	350	370	403
$P$ (bars)	s.w.v.p.	5000	5000	5000
Products	S	S (E)	E	W + Q

A1.7.4. *Chabazite*. In Table 14 results are given for the breakdown of chabazite from Richmond, Victoria, a locality that has yielded highly aluminous, alkali-rich specimens such as  $(\text{Ca}_{3.3}\text{Na}_{5.2}\text{K}_{1.2})\text{Al}_{13}\text{Si}_{23}\text{O}_{72}\cdot 36\text{H}_2\text{O}$  with variable  $\text{Ca}:\text{Na}:\text{K}$  ratios, (DOELTER, 1921, pp. 75-77).

Table 14

$T(^{\circ}\text{C})$	310	285	255	245	250	240	230	220	180
$P$	s.w.v.p	s.w.v.p	s.w.v.p	s.w.v.p	s.w.v.p	s.w.v.p	5000	s.w.v.p	s.w.v.p
Products	W	W	W + Ph	W + Ph	W + Ph	W + Ph	Ph + W + C	Ph + W + Ch	Ch

A1.7.5. *Laumontite*. Laumontite, shown by analysis to be almost alkali-free (PABST, personal communication) from Pine Creek Mine, Inyo County, California, with quartz produced wairakite at  $400^{\circ}\text{C}$ , and  $380^{\circ}\text{C}$ , at 2000 bars.

A1.7.6. *Dehydrated laumontite*. When laumontite is heated to  $800^{\circ}\text{C}$  it passes into a state which gives no X-ray pattern (KOIZUMI and KIRIYAMA, 1953). This material was used in a number of 30-day runs (Table 15) which were much longer than those of previous experiments by one of the authors (FYFE, 1955b).

Table 15

$P$ (bars)	s.w.v.p	s.w.v.p	2000	2000	s.w.v.p	s.w.v.p	2000	600
$T(^{\circ}\text{C})$	240	310	310	323	330	344	380	380
Products	Ch + Q	L	L + Q	L + Q	W	W.L.(H)	W + Q	(L + W)
Remarks	Q added	100%	Q added	Q added	100%	Heul. doubtful	Q added	3 days

A1.7.7. *Lawsonite*. Lawsonite from Valley Ford, California, with natural quartz gave products indicated in Table 16.

Table 16

$P$ (bars)	2000	2000	2000
$T(^{\circ}\text{C})$	400	395	382
Products	An,W,Q	An,W,Q	W,Q