Table 26. *Calculated compositions of liquid fractionates and crystalline residua derived from the high-alumina quartz tholeiite at 9–10 kb under wet conditions*[a]

Pressure		9 kb	10 kb	10 kb
Temperature		1,040° C	960° C	920° C
Nature and estimated % of crystals extracted	Initial liquid	18% cpx 5% amph 2% opx 1% ilm	18% cpx 25% amph 2% opx 1% ilm	18% cpx 32% amph 3% plag 2% opx 1% ilm
Liquid fractionate				
SiO_2	52.9	55.9	59.7	64.5
TiO_2	1.5	0.8	0.4	0.1
Al_2O_3	16.9	19.4	20.2	19.9
Fe_2O_3	0.3	0.4	0.5	0.7
FeO	7.9	7.2	5.8	3.7
MnO	0.2	0.3	0.3	0.4
MgO	7.0	4.4	2.1	2.0
CaO	10.0	7.8	6.7	3.9
Na_2O	2.7	3.3	3.4	3.6
K_2O	0.6	0.8	0.9	1.0
	100.0	100.3	100.0	99.8
Mol. prop. $\frac{100\ MgO}{MgO + FeO_{Total}}$	60.4	50.9	37.5	45.3
CIPW norm				
Qz		5.5	14.4	25.3
Or		4.8	5.4	5.9
Ab		27.9	28.8	30.5
An		35.7	33.2	19.3
Cor		—	1.4	5.8
Diop		2.4	—	—
Hyp		21.9	15.3	12.1
Mt		0.6	0.7	1.0
Ilm		1.5	0.8	0.2
Crystal residuum				
SiO_2		44.8	43.0	42.7
TiO_2		2.5	2.7	2.7
Al_2O_3		9.7	12.3	14.2
FeO		9.1	10.1	11.2
MgO		14.6	12.9	11.0
CaO		16.6	13.8	14.8
Na_2O		1.0	1.8	1.9
K_2O		0.04	0.2	0.2
		98.34	96.8	98.7
Mol. prop. $\frac{100\ MgO}{MgO + FeO}$		74.2	69.5	63.7

Table 27. *Calculated compositions of liquid fractionates and crystalline residua derived from the dacite composition under wet conditions at 27 kb*

Temperature		1,140° C	1,100° C
Nature and estimated % of crystals	Initial liquid	1% ga	9% ga 6% cpx
Liquid fractionate			
SiO_2	65.0	65.3[a]	68.8[a]
TiO_2	0.7	0.7	0.6
Al_2O_3	16.1	16.0	15.6
Fe_2O_3	1.4	1.4	1.6
FeO	3.5	3.3	1.5
MnO	0.1	0.1	0.1
MgO	1.8	1.7	0.6
CaO	5.0	5.0	3.8
Na_2O	3.6	3.6	4.1
K_2O	2.1	2.1	2.5
	99.3	99.2	99.2
Mol. prop. $\frac{100\,MgO}{MgO+FeO_{Total}}$	40.3	39.9	26.7
CIPW norm			
Qz	21.7	22.0	26.5
Or	13.0	12.4	14.8
Ab	30.5	30.5	34.6
An	21.5	21.3	16.8
Diop	2.3	2.9	1.7
Hyp	7.7	6.8	1.3
Mt	2.0	2.0	2.3
Ilm	1.3	1.3	1.1
Crystal residuum			
SiO_2		39.4	43.2
TiO_2		1.5	1.3
Al_2O_3		21.4	18.8
FeO		19.8	15.1
MnO		0.3	0.2
MgO		8.9	8.4
CaO		8.8	12.1
Na_2O		—	1.0
K_2O		—	—
		100.1	100.1
Mol prop. $\frac{100\,MgO}{Mg+FeO}$		44.5	49.8

[a] Denotes compositions determined from analyses calculated in the manner described on p. 114.

garnet will constitute the residuum when dacitic or rhyodacitic liquids are extracted.

The alumina content of the liquids is high compared with the content normally found in members of the calc-alkaline series. This is attributed to the fact that the experiments have been conducted on a high-alumina basaltic composition. If a basalt with an alumina content of about 14% had been used then the alu-