Table 16. *Calculated compositions of liquid fractionates and crystalline residua derived from the high-alumina olivine tholeiite composition at 27 kb*

Temperature		1,435° C	1,430° C	1,400° C
Nature and estimated % of crystals	Initial litquid	5% cpx	8% cpx 2% ga	25% cpx[b] 10% ga
Liquid fractionate				
SiO_2	50.3	50.4	50.6[a]	52.0[a]
TiO_2	1.7	1.8	1.8	2.0
Al_2O_3	17.0	17.3	17.2	17.1
Fe_2O_3	1.5	1.6	1.7	2.3
FeO	7.6	7.8	7.8	6.9
MnO	0.16	0.17	0.17	0.18
MgO	7.8	7.5	7.1	6.1
CaO	11.4	11.2	11.1	10.5
Na_2O	2.8	2.8	2.9	3.3
K_2O	0.18	0.2	0.2	0.28
	100.4	100.8	100.6	100.7
Mol. Prop. $\frac{100\ MgO}{MgO + FeO_{Total}}$	60.7	59.2	57.7	54.7
CIPW norm				
Qz	—	—	—	1.1
Or	1.1	1.2	1.2	1.7
Ab	23.7	23.7	24.6	27.9
An	33.3	34.1	33.3	31.0
Diop	18.9	17.5	17.7	17.1
Hyp	11.9	13.6	14.2	14.7
Ol	6.2	5.0	3.7	—
Mt	2.2	2.4	2.5	3.3
Ilm	3.2	3.4	3.4	3.8
Crystal residuum				
SiO_2		48.0	48.0	47.2
TiO_2		0.5	0.6	1.1
Al_2O_3		12.2	15.1	16.8
FeO		4.4	5.9	8.9
MnO		—	0.04	0.1
MgO		14.0	14.6	11.0
CaO		15.7	14.1	13.0
Na_2O		1.9	1.7	1.8
K_2O		—	—	—
		96.7	100.0	99.9
Mol. prop. $\frac{100\ MgO}{MgO + FeO}$		85.0	81.5	68.8

[a] Denotes compositions determined from analyses calculated in the manner described on p. 116.
[b] This pyroxene could not be analyzed and is assumed to be similar in composition to the pyroxene crystallizing from the high-alumina quartz tholeiite at 27 kb, 1,385° C; the degree of crystallization is similar for this temperature.

Table 17. *Calculated compositions of liquid fractionates and crystalline residua derived from the high-alumina quartz tholeiite composition at 27 kb*

Temperature		1,420° C	1,400° C	1,385° C
Nature and estimated % of crystals	Initial liquid	5% cpx 1% ga	15% cpx 5% ga	25% cpx 10% ga
Liquid fractionate				
SiO_2	52.9	53.2	54.2	56.0
TiO_2	1.5	1.5	1.5	1.6
Al_2O_3	16.9	17.0	17.3	17.0
Fe_2O_3	0.3	0.3	0.4	0.5
FeO	7.9	8.0	7.8	7.3
MnO	0.2	0.2	0.2	0.2
MgO	7.0	6.7	6.0	5.3
CaO	10.0	9.7	9.1	8.5
Na_2O	2.7	2.8	2.9	3.4
K_2O	0.6	0.6	0.7_5	0.9
	100.0	100.0	100.1_5	100.7
Mol. prop. $\frac{100\,MgO}{MgO + FeO_{Total}}$	60.4	59.1	56.7	54.9
CIPW norm				
Qz	1.3	1.7	3.4	4.7
Or	3.5	3.6	4.5	5.4
Ab	22.8	23.7	24.6	28.8
An	32.2	32.0	31.9	28.4
Diop	14.2	13.1	10.9	11.3
Hyp	22.6	22.5	21.5	18.4
Ol	—	—	—	—
Mt	0.4	0.4	0.6	0.7
Ilm	2.8	2.9	2.9	3.0
Crystal residuum				
SiO_2		47.9	47.6	47.3
TiO_2		1.1	1.4	1.3
Al_2O_3		14.7	15.5	16.7
FeO		7.0	8.3	9.0
MnO		0.1	0.1	0.1
MgO		12.3	11.2	10.1
CaO		14.1	13.5	12.8
Na_2O		1.8	1.7	1.7
K_2O		—	—	—
		99.0	99.1	99.0
Mol. prop. $\frac{100\,MgO}{MgO + FeO}$		75.8	70.6	66.7

The fractionation trends are illustrated diagrammatically by plotting on the familiar FMA diagram, frequently used to demonstrate fractionation trends of the calc-alkaline series (Figs. 9—11). The trend in fractionation observed at