

Fig. 2. Results of the dry experimental runs on the high-alumina quartz tholeiite composition

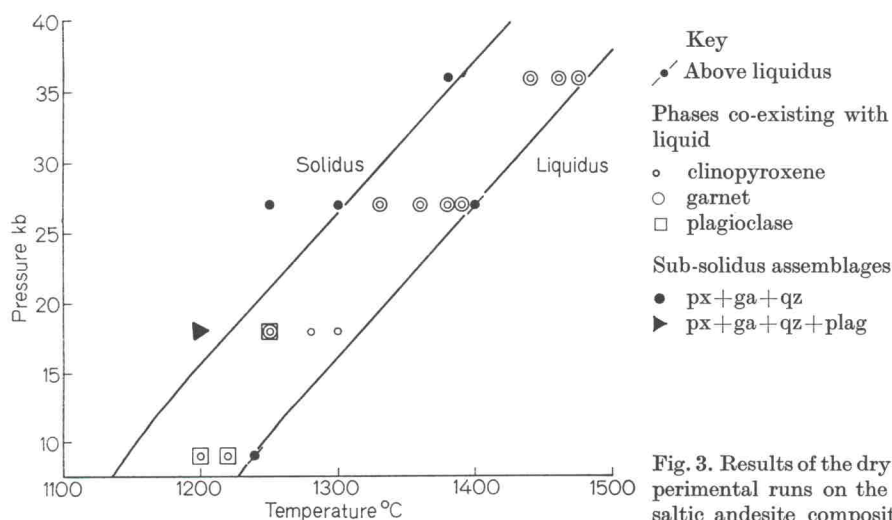


Fig. 3. Results of the dry experimental runs on the basaltic andesite composition

diagrams it should be pointed out that estimates of degree of crystallization and determination of the solidus temperature are hampered in both the basaltic compositions at 27–36 kb and also in the basaltic andesite composition at 36 kb, because of the presence of quench-pyroxene. However, with care, the primary and quench-pyroxenes can be distinguished optically. A brief description of the characteristic features of the petrography of the runs is given as follows.

Plagioclase is distinguished as small to medium sized (50 μ long) acicular crystals sometimes showing multiple twinning in runs near the liquidus. In near-solidus runs plagioclase crystals are difficult to distinguish from amoeboid glass but may be identified by X-ray means. Primary clinopyroxene occurs as medium sized

Experimental runs on the dacite composition under dry conditions

Phases present	Estimated % of glass	Comments and estimated relative proportions of
cpx plag qz ?glass	> ?	Uncertain solidus run, fine grained; plag > qz ≫
cpx plag qz ? glass	60	Medium grainsize, uncertain presence of quartz
plag glass	75	Medium grainsize, estimate 25% plagioclase.
plag glass	90	Medium grainsize, estimate 10% plagioclase.
plag glass	> 99	Very rare plagioclase laths, near-liquidus run.
cpx plag ga qz glass	30	Medium grainsize; plag > qz > cpx > ga.
cpx plag ga qz glass	50	Medium grainsize; plag, qz ≫ cpx > ga.
cpx plag qz glass	65	Medium grainsize; plag, qz ≫ cpx.
plag qz glass	80	Medium grainsize; approx. equal proportions of
plag qz glass	> 95	Minor small quartz crystals.
plag qz glass	100	Above-liquidus run.
cpx felds qz —	—	Very fine grained; qz, cpx ≫ felds; no garnet id
cpx felds ga qz glass	20	Fine grained except for large, inclusion-filled ga cpx > qz, felds > ga.
cpx ga qz glass	70	Medium grained, except for large, inclusion-fille qz > cpx > ga.
cpx ga qz glass	80	Medium grained, except for large, inclusion-fille qz > ga > cpx.
plag qz glass	> 95	Minor quartz, fine grained.
plag qz glass	100	Above liquidus run.
cpx qz		Fine grained; solidus or near-solidus run; glass cpx, qz only phases identified.